Detailed Implementation Review
India Health Sector
2006-2007
Volume I
Statement of Use and Limitations

This Report summarizes the findings of a Detailed Implementation Review (DIR) of five Bank-financed projects in India: the Food and Drugs Capacity Building Project, the Orissa Health Systems Development Project, the Second National AIDS Control Project, the Malaria Control Project, and the Tuberculosis Control Project.

The DIR is a strictly confidential internal World Bank document, the purpose of which is described herein. Its findings are of a highly sensitive and confidential nature and should not be used by the Government of India as the basis for initiating any administrative, criminal, or civil proceeding. The Government of India may wish to undertake its own investigation into matters raised by this DIR to determine whether any of the laws of India may have been violated. Moreover, the DIR should not be cited or referred to in the course of any Government of India investigation, in its investigation reports, or in any administrative, civil, or criminal proceedings undertaken by the Government of India related to the five projects reviewed in this Report.

This Report is provided without prejudice to the World Bank’s privileges and immunities.
Contents

VOLUME 1

Statement of Use and Limitations .................... Inside Front Cover
Acronyms and Abbreviations.............................................................. xi
Executive Summary ..................................................................................1

Introduction

The Objectives and Methodology of the Detailed Implementation Review ................................................................. 23
Risks of Fraud and Corruption in Bank-Financed Projects.............................. 23
The Detailed Implementation Review ......................................................... 24
DIR Approach and Methodology.......................................................... 25
DIR Components and Phases ............................................................................................................... 26
DIR’s Use of Indicators .......................................................................................... 28
Interpretation of DIR Findings ............................................................................. 29

History and Background of World Bank Lending in the India Health Sector ................................................................. 31
India at a Glance.......................................................................................... 31
India’s Health Needs..................................................................................... 32
World Bank Lending in the India Health Sector ................................................ 34
Corruption in India ....................................................................................... 35
Reproductive and Child Health Project Investigation ....................................... 37
Resultant Actions ........................................................................................ 39

Overview of the India Detailed Implementation Review ..........41
Selection of Projects....................................................................................... 41
Funding and Type of Procurement ................................................................. 44
DIR Scope .................................................................................................. 44
A. Expansion of Scope from Previous DIRs......................................................... 44
B. Procurements by Procurement Support Agencies......................................... 45
C. Procurements by State and District Societies ................................................ 45
D. Review of Implementation...................................................................... 46
Table of Contents

E. State-Based Project ............................................................................................. 46
Preliminary Phase .................................................................................................. 46
Review Phases ......................................................................................................... 47
  A. Document Request ............................................................................................. 47
  B. The DIR Facility .................................................................................................. 49
  C. Document Collection, Scanning, and Printing ............................................... 50
  D. Contract and Procurement Data Input ............................................................ 51
  E. Data Analytics ..................................................................................................... 51
  F. DIR Project Review Teams ................................................................................ 52
  G. Review of Procurement and Contracting .......................................................... 52
  H. Review of Financial Management and Audit Reports ...................................... 52
  I. Review of Implementation and Supply Chains ................................................. 53

**Food and Drugs Capacity Building Project**

**OVERVIEW** ........................................................................................................ 55
  Project Objective .................................................................................................... 55
  Summary of Findings ............................................................................................. 56

**PROJECT BACKGROUND** .................................................................................... 59
  Components ........................................................................................................... 59
  Implementation Structure ....................................................................................... 61
    A. Procurement Arrangements .............................................................................. 61
    B. Financial Management and Disbursement Arrangements ............................ 62
  Project Reports and Assessments .......................................................................... 62
  Costs and Time ....................................................................................................... 63

**THE DIR’S APPROACH TO THE FDCBP** .......................................................... 63
  Procurement of Equipment Contracts .................................................................. 63
  Implementation of Equipment Contracts ................................................................ 65
  Procurement of Civil Works Contracts .................................................................. 67
  Implementation of Civil Works .............................................................................. 68
  Complaints ............................................................................................................. 68
  Project Reports and Assessments .......................................................................... 68

**FINDINGS** ............................................................................................................ 69
  Equipment Procurement ......................................................................................... 69
    A. The Steering Committee .................................................................................... 71
    B. Other Indicators of Preferential Treatment of Suppliers ................................. 79
    C. Disqualification of Lower Cost Bidders ............................................................ 103
Equipment Implementation
  A. General Equipment Implementation Deficiencies
  B. Specific Equipment Implementation Deficiencies Corresponding to Equipment Contracts Reviewed
  C. Payment for Equipment

Civil Works Procurement and Implementation
  A. Civil Works Procurement
  B. Civil Works Implementation
  C. Issuance of Completion Certificates

Project Reports and Assessments
  A. Prior-Reviews
  B. Post-Reviews
  C. Aides-Mémoire

Photo Galleries
  Photo Gallery 1 – Electrical Problems
  Photo Gallery 2 – Water Supply and Infrastructure Problems
  Photo Gallery 3 – Cement Render and Other Cement Problems
  Photo Gallery 4 – Water Damage and Mold Problems
  Photo Gallery 5 – Concrete Problems
  Photo Gallery 6 – General Construction Issues
  Photo Gallery 7 – Additional Work Required
  Photo Gallery 8 – General Maintenance Issues
  Photo Gallery 9 – Poor Quality Materials

Orissa Health Systems Development Project

Overview
  Project Objective
  Summary of Findings

Project Background
  Project Design
  A. Components
  B. Implementation Structure
  C. Risks, Mitigating Measures, and Controls
  D. Costs and Time

Project Implementation
A. Natural Disasters Hampered Initial Project Implementation ..........177
B. Project Status at Mid-Term .................................................................178
C. Continued Implementation Delays ......................................................179
D. The First Extension ..............................................................................180
E. Reported Performance Improvements .............................................182
F. The Second Extension ..........................................................................183
G. Site Reviews and Implementation Quality Concerns .......................184
H. Project Evaluation ................................................................................186

THE DIR’S APPROACH TO THE OHSDP ..............................................188
A. Implementation ......................................................................................189
B. Contract Procurement ..........................................................................191
C. Project Reports and Assessments .......................................................192

FINDINGS ..................................................................................................192
Civil Works ..................................................................................................192
A. Indicators of Fraud in Civil Works Implementation ..............................193
B. An In-Depth Review of Civil Works Documents Revealed That
   Implementation Failures May Be Indicators of Fraud ..............................203
C. Indications That the PMC’s Status Reports Were Inaccurate .................225
D. Indicators of Fraud in the PMC’s Procurement of Civil
   Works Consultants ..................................................................................225
E. Indicators of CMC-Bidder Collusion and Fraud in
   Contractor Procurement ..........................................................................230

Equipment, Instruments, and Furnishings ..............................................244
A. ELMARC Was Highly in Debt at the Time of Its First Contract, and Its
   Contracts Gave It No Responsibility for Maintenance ............................245
B. Indicators of Fraud and Corruption in EIF Implementation ....................247
C. Indicators of Fraud and Corruption in EIF Procurement ..........................259

Project Audit Reports .................................................................................264
A. State Auditing Techniques Did Not Provide a Timely, Transparent,
   and Complete Overview of Project Expenditures ......................................265
B. The Project’s Requested Budget Allocations Often Far Exceeded
   Its Actual Expenditures ..........................................................................265
C. Certified Expenditures Do Not Correspond to Reported
   Civil Works Activity ................................................................................267
D. Audits Identified Additional Financial Record-Keeping Issues ...............268
E. The Bank Responded to Audit Report Issues ..........................................269

Project Reports and Assessments ...............................................................269
A. Procurement Post-Reviews .................................................................270
B. Project Supervision ...............................................................................271
C. Project Evaluation in the ICR ...............................................................273

PHOTO GALLERY .........................................................................................275
VOLUME 2

Second National AIDS Control Project

Overview ........................................................................................................319

Project Objective ..........................................................................................319
Summary of Findings .....................................................................................320

Project Background ......................................................................................323

Project Design ..............................................................................................323
A. Components ...............................................................................................323
B. Implementation Structure ..........................................................................323
C. Project Controls ..........................................................................................325
D. Project Costs and Timeline ........................................................................326

Reported Observations and Assessments ....................................................326

The DIR’s Approach to the NACP II ..........................................................327

Participation of NGOs ..................................................................................327
Implementation of Contracts for Test Kits and Blood Bank Equipment ......330
A. Test Kits .....................................................................................................330
B. Blood Bank Equipment .............................................................................332

International Procurement of Test Kits and Blood Bank Equipment .........333
A. Review of Contract Documents .................................................................333
B. Limitations of Contract Document Review ..............................................333

Local Procurement of Test Kits and Blood Bank Equipment ......................334

Findings ........................................................................................................334

Participation of NGOs ..................................................................................334
A. Lack of Financial Controls over Disbursements to NGOs ......................335
B. Selection, Procurement, and Oversight of NGOs .....................................339
C. Complaints and News Reports .................................................................347

Implementation of Contracts .......................................................................349
A. Implementation of Test Kit Contracts .........................................................349
B. Implementation of Blood Bank Equipment Contracts ..............................361

International Procurement of Test Kits and Blood Bank Equipment ...........370
A. Questions as to the Procurement and Credibility of the PSAs .................370
B. Indicators of Fraud and Corruption in the Procurement of Test Kits .......372
Table of Contents

C. Indicators of Fraud and Corruption in the Procurement of Blood Bank Equipment .................................................. 375

Local Procurement of Test Kits and Blood Bank Equipment .......... 380
A. Summary of Findings .......................................................................................... 381
B. Nagpur Regional Circle (Maharashtra) .......................................................... 383
C. Nasik Regional Circle (Maharashtra) ............................................................. 386
D. Pune Regional Circle (Maharashtra) .............................................................. 388
E. The OSACS ........................................................................................................ 391
F. The KSAPS ......................................................................................................... 396
G. The CGSACS ..................................................................................................... 400

Project Reports and Assessments ................................................................... 404
A. Oversight of NGOs ........................................................................................... 404
B. Implementation of Contracts .......................................................................... 406
C. Procurement of Test Kits and Blood Bank Equipment ................................. 406

PHOTO GALLERY ................................................................................................. 408

**Malaria Control Project**

**OVERVIEW** ................................................................................................. 415

Project Objective ............................................................................................... 415
Summary of Findings .......................................................................................... 416

**PROJECT BACKGROUND** ........................................................................ 418

Project Design ...................................................................................................... 418
A. Components ...................................................................................................... 418
B. Implementation Structure ............................................................................. 419
C. Project Controls .............................................................................................. 420
D. Costs and Time ................................................................................................. 422

Project Implementation ....................................................................................... 422
A. Initial Implementation Problems .................................................................... 422
B. Suspension ......................................................................................................... 423
C. Implementation Performance ......................................................................... 423
D. Suspicions of Collusive Behavior .................................................................... 424
E. Project Evaluation ............................................................................................. 425

**THE DIR’S APPROACH TO THE MCP** ................................................... 425

Contract Procurement .......................................................................................... 427
A. Centrally Procured ICB and NCB Contracts by RITES ............................... 427
B. Locally Procured Contracts by States and Districts ...................................... 428
Detailed Implementation Review, India Health Sector

Review of Contract Implementation ................................................................. 428
Complaints ........................................................................................................ 430
Project Reports and Assessments ................................................................. 430

**FINDINGS** .................................................................................................. 430

Pyrethroids ......................................................................................................... 430
  A. Indicators of Collusive Behavior Were Identified in the Procurement Process .............................................................................. 432
  B. Indicators Ceased in 2004, Implying an End to Collusion .......... 447

Bed Nets .............................................................................................................. 448
  A. The Agrawal Family Businesses Exhibited Indicators of Engaging in Collusive Practices ................................................................. 451
  B. The Agrawal Companies May Have Received Collusive Support from Two Additional Competing Bidders .................................. 458
  C. The Number of Bidders per Contract Progressively Decreased over the History of the MCP Bed Net Tenders ......................... 458
  D. Bidders Competing against the Agrawal Companies Exhibited Independent Indicators of Corrupt and Fraudulent Practices ...... 459
  E. Other Indicators ......................................................................................... 461
  F. The Quality of EMCO's Bed Nets Is Contested ......................................... 462

Pharmaceuticals ................................................................................................ 463
  A. The Pharmaceutical Contracts ................................................................. 464
  B. Concentration of Contract Awards among Limited Winners .............. 466
  C. Indicators for Chloroquine Phosphate and Combi-Blister Packs ........ 467
  D. Fraud and Corruption Indicators under DEC Contracts ....................... 469
  E. Similarities and Timing of Indicators with Collusive Activities on RCH ................................................................. 472

RITES ............................................................................................................... 473
  A. RITES May Have Shared Pyrethroid Bid Cost Estimates with the Four Firms .................................................................................. 473
  B. Complaints Allege That RITES Improperly Supported Certain Bidders ......................................................................................... 476
  C. RITES Acted Insufficiently to Impede Apparent Collusion .................. 477
  D. Indicators of Collusion Ended at the Same Time on Multiple RITES Procurements ................................................................. 479

Competitive International Bidding Prevented .............................................. 480

Analysis of Supply Chain ................................................................................. 482
  A. Overview of the MCP Supply Chain and Facilities (State, District, Local Centers) ................................................................. 482
  B. District Malaria Offices ............................................................................ 483
  C. Storage Facilities ....................................................................................... 483
  D. Inventory Systems Used by the SMO and DMO .................................... 485
Table of Contents

E. Inventory Documents and Records .................................................................486
F. Inventory Management ....................................................................................487
G. Quality Testing ...............................................................................................488
H. Monitoring of Expiry Dates ............................................................................490
I. Issues of Under-Deliveries .............................................................................490

Procurement at the State and District Level ......................................................494
A. Local Contract Review Methodology ............................................................494
B. Local Contract Data .......................................................................................495
C. Nagpur ...........................................................................................................497
D. Nasik .............................................................................................................503

PROJECT REPORTS AND ASSESSMENTS .................................................508

Supervision Documents .....................................................................................509
A. Audit Reports ...............................................................................................509
B. Procurement Post-Reviews ............................................................................514
C. SOE Financial Reviews ................................................................................516
D. The Implementation Completion Report ....................................................517

Complaints Management ................................................................................520
A. Sources of Complaints ................................................................................520
B. INT Receipt of, and Action Upon, Complaints ...........................................521
C. Distribution of Complaints across Procured Items ......................................522
D. Complaint Resolution Statistics ..................................................................522

Tuberculosis Control Project

OVERVIEW ...........................................................................................................523

Project Objective ...............................................................................................523
Summary of Findings ........................................................................................524

PROJECT BACKGROUND .............................................................................526

Design ................................................................................................................526
A. Components .................................................................................................526
B. Implementation Structure ............................................................................527
C. Project Controls .............................................................................................528
D. Costs and Time ...............................................................................................530

Implementation ................................................................................................531
A. Initial Problems .............................................................................................531
B. Suspension .....................................................................................................531
C. Performance .................................................................................................532
D. Project Evaluation .........................................................................................533
The DIR’s Approach to the TCP ..............................................................533

Procurement of Contracts........................................................................534
   A. Pharmaceuticals and Equipment............................................................534
   B. Locally Procured Contracts.................................................................535

Project Implementation..............................................................................535
   A. Pharmaceuticals....................................................................................537
   B. Equipment............................................................................................537

Complaints....................................................................................................537

Project Reports and Assessments...............................................................538

Findings ......................................................................................................538

Pharmaceuticals ..........................................................................................538
   A. Review of Procurement........................................................................540
   B. Review of Implementation...................................................................560

Equipment.....................................................................................................561
   A. Review of Procurement........................................................................562
   B. Review of Implementation...................................................................562

Locally Procured Contracts .......................................................................562
   A. Pune, Maharashtra................................................................................565
   B. Bangalore, Karnataka—Bangalore City..................................................569
   C. Bangalore, Karnataka—Bangalore Rural...............................................575
   D. Bangalore, Karnataka—Karnataka State Tuberculosis Control Society....577

Project Reports and Assessments...............................................................579
   A. Supervision Documents.......................................................................579
   B. Complaints Management.....................................................................590

Description of Product Codes .................................................................593
## Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAS</td>
<td>Atomic Absorption Spectrophotometer with a Hydride Mercury Vapor Generator</td>
</tr>
<tr>
<td>ADMO</td>
<td>Assistant District Medical Officer</td>
</tr>
<tr>
<td>AH</td>
<td>Area Hospital</td>
</tr>
<tr>
<td>AMC</td>
<td>annual maintenance contract</td>
</tr>
<tr>
<td>BEC</td>
<td>Bid Evaluation Committee</td>
</tr>
<tr>
<td>BER</td>
<td>bid evaluation report</td>
</tr>
<tr>
<td>C and S</td>
<td>Care and Support</td>
</tr>
<tr>
<td>CARDTS</td>
<td>Citizen Alliance for Rural Development and Training Society</td>
</tr>
<tr>
<td>CDMO</td>
<td>Chief District Medical Officer</td>
</tr>
<tr>
<td>CFL Ghaziabad</td>
<td>Central Food Laboratory Ghaziabad</td>
</tr>
<tr>
<td>CFL Mysore</td>
<td>Central Food Laboratory Mysore</td>
</tr>
<tr>
<td>CGSACS</td>
<td>Chhattisgarh AIDS Control Society</td>
</tr>
<tr>
<td>CHC</td>
<td>Community Health Center</td>
</tr>
<tr>
<td>CIB</td>
<td>Central Insecticide Board</td>
</tr>
<tr>
<td>CIPL Ghaziabad</td>
<td>Central Indian Pharmcopoeia Laboratory Ghaziabad</td>
</tr>
<tr>
<td>CMC</td>
<td>construction management consultant</td>
</tr>
<tr>
<td>CPFMS</td>
<td>Computerized Project Finance Management</td>
</tr>
<tr>
<td>CSSM</td>
<td>Child Survival and Safe Motherhood Project</td>
</tr>
<tr>
<td>CSW</td>
<td>commercial sex worker</td>
</tr>
<tr>
<td>CTD</td>
<td>Central Tuberculosis Division</td>
</tr>
<tr>
<td>DACS</td>
<td>District AIDS Control Society</td>
</tr>
<tr>
<td>DCA</td>
<td>Development Credit Agreement</td>
</tr>
<tr>
<td>DDHS</td>
<td>Deputy Director of Health Services</td>
</tr>
<tr>
<td>DEC</td>
<td>diethyl carbamazine citrate</td>
</tr>
<tr>
<td>DfID</td>
<td>Department for International Development</td>
</tr>
<tr>
<td>DHH</td>
<td>District Headquarters Hospital</td>
</tr>
<tr>
<td>DIR</td>
<td>Detailed Implementation Review</td>
</tr>
<tr>
<td>DIRDB</td>
<td>Detailed Implementation Review Database</td>
</tr>
<tr>
<td>DM</td>
<td>District Malaria (Officer)</td>
</tr>
<tr>
<td>DMO</td>
<td>District Malaria Office</td>
</tr>
<tr>
<td>DOHFW</td>
<td>Orissa Department of Health and Family Welfare</td>
</tr>
<tr>
<td>DOTS</td>
<td>Directly Observed Treatment-Short Course</td>
</tr>
<tr>
<td>DTO</td>
<td>District Tuberculosis Officer</td>
</tr>
<tr>
<td>EC</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>EIF</td>
<td>Equipment, Instruments, and Furnishings</td>
</tr>
<tr>
<td>FBS</td>
<td>Fixed Budget Selection</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>FDCBP</td>
<td>Food and Drugs Capacity Building Project</td>
</tr>
<tr>
<td>FDL Mumbai</td>
<td>Food and Drug Laboratory Mumbai</td>
</tr>
<tr>
<td>FDTL Lucknow</td>
<td>Food and Drug Testing Laboratory Lucknow</td>
</tr>
<tr>
<td>FRSL Ghaziabad</td>
<td>Food Research and Standardization Laboratory Ghaziabad</td>
</tr>
<tr>
<td>GAC</td>
<td>Goods Acceptance Certificate</td>
</tr>
<tr>
<td>GMP</td>
<td>Good Manufacturing Practices</td>
</tr>
<tr>
<td>GMSD</td>
<td>Government Medical Store Depot</td>
</tr>
<tr>
<td>GSW</td>
<td>Global Spin Weave</td>
</tr>
<tr>
<td>HLL</td>
<td>Hindustan Latex Limited</td>
</tr>
<tr>
<td>HPLC</td>
<td>high-performance liquid chromatograph</td>
</tr>
<tr>
<td>HSCC</td>
<td>Hospital Services Consultancy Corporation India Limited</td>
</tr>
<tr>
<td>ICB</td>
<td>international competitive bidding</td>
</tr>
<tr>
<td>ICR</td>
<td>Implementation Completion Report</td>
</tr>
<tr>
<td>IDA</td>
<td>International Development Association</td>
</tr>
<tr>
<td>IDCO</td>
<td>Orissa Industrial Infrastructure Development Corporation</td>
</tr>
<tr>
<td>IEC</td>
<td>information, education, and communication</td>
</tr>
<tr>
<td>IIH</td>
<td>Institute of Immunohaematology</td>
</tr>
<tr>
<td>INR</td>
<td>Indian Rupee (Throughout this report, USD-equivalent value is provided for convenience only and, unless otherwise noted, is calculated at the rate of INR 45 = USD 1.)</td>
</tr>
<tr>
<td>INT</td>
<td>Department of Institutional Integrity</td>
</tr>
<tr>
<td>INTIS</td>
<td>INT Information System</td>
</tr>
<tr>
<td>IPC</td>
<td>Integrated Purchase Committee</td>
</tr>
<tr>
<td>IRCS</td>
<td>Indian Red Cross Society</td>
</tr>
<tr>
<td>IR</td>
<td>Inception Report</td>
</tr>
<tr>
<td>IRIS</td>
<td>Integrated Records and Information Service database</td>
</tr>
<tr>
<td>IRS</td>
<td>individual residual spraying</td>
</tr>
<tr>
<td>ISR</td>
<td>Implementation Status Report</td>
</tr>
<tr>
<td>ITB</td>
<td>invitation to bid</td>
</tr>
<tr>
<td>JAT</td>
<td>Joint Appraisal Team</td>
</tr>
<tr>
<td>KSAPS</td>
<td>Karnataka State AIDS Prevention Society</td>
</tr>
<tr>
<td>LCC</td>
<td>long-course chemotherapy</td>
</tr>
<tr>
<td>LIB</td>
<td>limited international bidding</td>
</tr>
<tr>
<td>LOAG2</td>
<td>Loan Administration Group 2</td>
</tr>
<tr>
<td>MCP</td>
<td>Malaria Control Project</td>
</tr>
<tr>
<td>MDACS</td>
<td>Mumbai District AIDS Control Society</td>
</tr>
<tr>
<td>MDCC</td>
<td>Material Dispatch Clearance Certificate</td>
</tr>
<tr>
<td>MOHFW</td>
<td>Ministry of Health and Family Welfare</td>
</tr>
<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>MSACS</td>
<td>Maharashtra AIDS Control Society</td>
</tr>
<tr>
<td>MSO</td>
<td>Medical Stores Organization</td>
</tr>
<tr>
<td>NACB</td>
<td>National AIDS Control Board</td>
</tr>
<tr>
<td>NACO</td>
<td>National AIDS Control Organization</td>
</tr>
<tr>
<td>NACP</td>
<td>National AIDS Control Program</td>
</tr>
<tr>
<td>NAMP</td>
<td>National Anti-Malaria Program</td>
</tr>
<tr>
<td>NARI</td>
<td>National AIDS Research Institute</td>
</tr>
<tr>
<td>NCB</td>
<td>national competitive bidding</td>
</tr>
<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>NIB</td>
<td>National Institute of Biologicals</td>
</tr>
<tr>
<td>NICD</td>
<td>National Institute of Communicable Diseases</td>
</tr>
<tr>
<td>NMP</td>
<td>National Malaria Eradication Program</td>
</tr>
<tr>
<td>NEPEP</td>
<td>Indian National Polio Eradication Project</td>
</tr>
<tr>
<td>NPFC</td>
<td>National Plasma Fractionation Center</td>
</tr>
<tr>
<td>NRL</td>
<td>National Reference Laboratories</td>
</tr>
<tr>
<td>NTCP</td>
<td>National Tuberculosis Control Program</td>
</tr>
<tr>
<td>OCCL</td>
<td>Orissa Construction Corporation Limited</td>
</tr>
<tr>
<td>OCFC</td>
<td>Oversight Committee for Fraud and Corruption</td>
</tr>
<tr>
<td>OHSDP</td>
<td>Orissa Health Systems Development Project</td>
</tr>
<tr>
<td>OSACS</td>
<td>Orissa State AIDS Control Society</td>
</tr>
<tr>
<td>PAD</td>
<td>Project Appraisal Document</td>
</tr>
<tr>
<td>PC</td>
<td>product code</td>
</tr>
<tr>
<td>PCU</td>
<td>Program Coordination Unit</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Center</td>
</tr>
<tr>
<td>PHL Bangalore</td>
<td>Public Health Laboratory Bangalore</td>
</tr>
<tr>
<td>PHL Bhubaneswar</td>
<td>Public Health Laboratory Bhubaneswar</td>
</tr>
<tr>
<td>PHL Meerut</td>
<td>Public Health Laboratory Meerut</td>
</tr>
<tr>
<td>PHL Pune</td>
<td>Public Health Laboratory Pune</td>
</tr>
<tr>
<td>PHL Thane</td>
<td>Public Health Laboratory Thane</td>
</tr>
<tr>
<td>PLA</td>
<td>personal ledger account</td>
</tr>
<tr>
<td>PIP</td>
<td>Project Implementation Plan</td>
</tr>
<tr>
<td>PMC</td>
<td>Project Management Cell</td>
</tr>
<tr>
<td>PSA</td>
<td>Procurement Support Agency</td>
</tr>
<tr>
<td>PSR</td>
<td>Project Status Report</td>
</tr>
<tr>
<td>PSU</td>
<td>Program Support Unit</td>
</tr>
<tr>
<td>QAG</td>
<td>Quality Assurance Group</td>
</tr>
<tr>
<td>QCBS</td>
<td>quality- and cost-based selection</td>
</tr>
<tr>
<td>RCH</td>
<td>Reproductive and Child Health Project</td>
</tr>
<tr>
<td>RFQ</td>
<td>request for quotation</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>RKDC</td>
<td>Rohit Kumar Das Construction</td>
</tr>
<tr>
<td>RNTCP</td>
<td>Revised National Tuberculosis Control Program</td>
</tr>
<tr>
<td>SACS</td>
<td>State AIDS Control Society</td>
</tr>
<tr>
<td>SAR</td>
<td>South Asia Region</td>
</tr>
<tr>
<td>SATHI</td>
<td>STD, AIDS, and Total Health Intervention Project</td>
</tr>
<tr>
<td>SBC Patra</td>
<td>Sri Baishnab Charan Patra</td>
</tr>
<tr>
<td>SCAG</td>
<td>Senior Consultants Advising Group</td>
</tr>
<tr>
<td>SCC</td>
<td>special conditions of contract</td>
</tr>
<tr>
<td>SDCL Aurangabad</td>
<td>State Drug Control Laboratory Aurangabad</td>
</tr>
<tr>
<td>SDCL Mumbai</td>
<td>State Drug Control Laboratory Mumbai</td>
</tr>
</tbody>
</table>
| SDH     | Sub Divisional Hospital *(OHSDP Chapter)*  
|         | State District Hospitals *(NACP II Chapter)* |
| SDL Bangalore | State Drug Laboratory Bangalore |
| SDR     | Special Drawing Rights |
| SDTRL Bhubaneswar | State Drug Testing and Research Laboratory Bhubaneswar |
| SFDL Raipur | State Food and Drug Laboratory Raipur |
| SGS     | SGS Nederland, B.V. |
| SMO     | State Malaria (Officer) |
| SOE     | statement of expenditure |
| SROUT   | Social Revival Group of Urban, Rural and Tribals |
| STAR    | Staff Appraisal Report |
| STI     | sexually transmitted infection |
| TAC     | Technical Advisory Committee |
| TB      | tuberculosis |
| TCP     | Tuberculosis Control Project |
| TI      | targeted intervention |
| TTL     | Task Team Leader |
| UC      | Utilization Certificate |
| UHMH    | Ursula Horsman Memorial Hospital |
| UNDP    | United Nations Development Programme |
| UNICEF  | United Nations Children’s Fund |
| UPHSDP  | U.P. Health Systems Development Project |
| UPSACS  | Uttar Pradesh State AIDS Control Society |
| USD     | United States dollar |
| VCTC    | Voluntary Counseling and Testing Center |
| WBCN    | World Bank Contract Number |
| WBOD    | World Bank Office Delhi |
| WHO     | World Health Organization |
In 2007, the World Bank (Bank) completed a Detailed Implementation Review (DIR) of five health projects in its India portfolio (the India DIR): the Food and Drugs Capacity Building Project (FDCBP), the Orissa Health Systems Development Project (OHSDP), the Second National AIDS Control Project (NACP II), the Malaria Control Project (MCP), and the Tuberculosis Control Project (TCP). The Bank and the Government of India agreed to conduct a DIR of the India health sector after a 2005 Bank investigation revealed systemic fraud and corruption in a large India health project and suggested that other projects may have been similarly compromised.

A DIR is a proactive tool that examines Bank-financed projects in a specific country or sector to determine their susceptibility and possible exposure to fraud, corruption, collusion, and coercion (fraud and corruption). A DIR is not a traditional fraud or corruption investigation that determines whether specific allegations of misconduct can be substantiated; rather, it reports whether the projects exhibit indicators, or “red flags,” of fraud and corruption that may impact upon the achievement and sustainability of their development objectives. The nature, patterns, and prevalence of these indicators provide the basis for remedial action by the country and the Bank.

The India DIR found significant indicators of fraud and corruption in all five projects. These indicators appear to have affected, to varying extents, the projects’ implementation and outputs. The DIR found indicators of fraudulent and corrupt practices related to procurement, such as collusive behaviors, bid rigging, bribery, and manipulated bid prices. It also found indicators of fraudulent and corrupt practices related to project implementation, including deficient civil works certified as complete; broken or damaged equipment certified as compliant with specifications; and under-delivery of services from contractual obligations. Moreover, the DIR observed inadequate project financial, audit, and internal controls systems. These findings will result in a number of Bank investigations into specific cases of possible fraud and corruption.

In addition to the indicators, all five projects exhibited: (a) persistent weaknesses in the Bank’s pre-project assessment and mitigation of fraud and corruption risks; (b) persistent weaknesses in the ability of Bank project supervision to iden-
The DIR found that several projects with high project implementation ratings exhibited significant problems in the quality of project implementation, suggesting flaws in the Bank’s project evaluation methodology.

The DIR’s findings are consistent with the findings of the Bank’s previous investigation and related Bank reports regarding its New Delhi procurement hub and trust fund operations.

This executive summary outlines the DIR’s findings and sets out its observations regarding the five Bank-financed health projects. Part I of the executive summary explains the DIR’s rationale, objectives, and methodology, and introduces the projects reviewed, and Part II provides a summary of findings.

I. Background

Why Conduct a DIR of the India Health Sector?

The Bank and the Government of India agreed to a DIR of the India health sector because India’s need for health sector assistance is great; the Bank’s lending to the sector is increasing rapidly; and a Bank investigation raised significant concerns that Bank-funded projects in the sector are being compromised by fraud and corruption.

India faces significant health challenges. Despite rapid economic growth, rising life expectancy, and falling infant mortality rates, India suffers from widespread poverty and severe public health issues. More than 27 percent of its population lives below the poverty line, and 36 percent of its people live on less than USD 1 per day. India also bears a disproportionate burden of the world’s diseases. Measured in terms of healthy years lost to illness, the World Health Organization estimates that Indians—who make up 17 percent of the world’s population—suffer 28 percent of the world’s total years lost to respiratory infections, 25 percent of the years lost to tuberculosis, 24 percent of the years lost to diarrheal diseases, 21
percent of the years lost to measles, and 45 percent of the years lost to leprosy. In addition, 2.5 million people in India are living with HIV/AIDS.

The Government of India has recognized that large improvements can be made in the health sector. Public health spending constitutes only one percent of GDP, placing India below most low-income countries and in the bottom 20 percent of all countries. Nearly 80 percent of India’s health spending comes from individuals’ out-of-pocket payments at the point of service: private funds finance 93 percent of all hospitals, 64 percent of all hospital beds, and 80 percent of all doctors nationwide. Being unable to pay, the poor are shunted to inadequately funded public hospitals or refrain from seeking medical care. As a result, the poorest 20 percent of Indians suffer mortality and malnutrition rates more than twice those of the wealthiest 20 percent.

For half a century, health constituted only a tiny fraction of the Bank’s work in India, but this dramatically changed in the 1990s. Between 1990 and 2000, the Bank began 22 new India health sector projects with a total financial commitment of USD 6.8 billion: more than triple the number, and 16 times the funding, of all of the previous India health projects combined. Since 2001, the Bank has approved 10 additional health projects and authorized supplemental financing for two more, totaling USD 1.5 billion in new loan and credit commitments. Overall, since 1990, health has constituted approximately 37 percent of India’s new Bank financial commitments. India is currently the Bank’s largest borrower, with 75 active projects worth a total IBRD/IDA commitment of USD 15.2 billion.

The Bank’s focus on the India health sector will continue. The most recent Country Assistance Strategy (CAS) for India emphasizes increased health sector activity, including projects to improve the private market for health, increase public health spending, reform state health systems, combat communicable diseases, and improve sanitation and clean water supplies. In keeping with this broad agenda, the CAS planned at least 10 new health sector projects between the fiscal years 2005 and 2008 that would represent 16 percent of India’s new borrowing. Some of these projects have been approved, while four others, costing a combined USD 950 million, are in the Bank’s project pipeline.

However, studies suggest that corruption is a widespread problem in India: in the largest empirical study of corruption in India, conducted in 2005 by Transparency International’s India chapter, 62 percent of survey respondents said that they personally had paid bribes to receive government services, and 27 percent of respondents—statistically representing about 30 million households—reported
paying bribes at government hospitals in exchange for medicines, patient admission, and medical consultation and treatment. These survey results accord with the 2005 findings of a Bank investigation into the Reproductive and Child Health Project (RCH). The Bank’s investigation revealed systemic fraud and corruption in the project, including large-scale collusive practices between bidders, systemic falsification of performance certificates, and evidence that the project’s procurement agents and government officials were receiving kickbacks. The RCH investigation also received allegations that similar problems were affecting other India health sector projects. Because of these findings, the Bank and the Government of India agreed to have a DIR conducted on five projects in the sector.

**DIR Objectives and Methodology**

Fraud and corruption undermine the Bank’s development efforts in many ways, most notably by diverting precious funds from Bank projects and thereby denying those projects the full complement of goods and services that they need to fulfill their development goals. A DIR’s objective is to identify “red flags,” called indicators, which suggest the presence and prevalence of fraud and corruption in a project. The indicators utilized by the DIR range from facts that directly indicate fraudulent or corrupt activities (such as witness admissions or documents confirmed to be fraudulent) to facts that indicate a high likelihood of fraudulent or corrupt activities (such as bidders sharing same addresses or providing sequentially numbered bid security documents) to facts that suggest an increased risk of possible fraudulent or corrupt activities (such as inadequate auditing methodologies or failure to follow proper procurement guidelines). Although different indicators have different abstract evidentiary weights, indicators can be understood properly only when they are analyzed holistically and in their surrounding contractual context. This report discusses identified indicators accordingly. The DIR considered indicator weights in its initial contract data review, and INT may consider weight when prioritizing investigations based upon the DIR’s findings.

A DIR is not an investigation that aims at substantiating specific allegations of fraud and corruption. Instead, it has a broader objective to indicate whether a project likely suffers from fraud and corruption, to suggest how large that problem may be, and to identify areas for follow-up investigation and intervention. In so doing, the DIR also identifies weaknesses in project design, implementation, controls, and evaluations that could facilitate fraud and corruption or obscure the Bank’s observation of their effects.
The DIR follows a holistic and flexible methodology that reviews the actions and activities of, among others, project implementation units, procurement agencies, suppliers, contractors, and others who could divert or misuse project funds. The DIR searches for indicators throughout a contract’s life cycle, from procurement to final payment. For example, if the DIR identified sequential bid security numbers across different bidders, it would: (a) conduct additional computer data analyses to identify other links or patterns connecting the suspect bidders; (b) review procurement records for indicators that the bidders engaged in bid rigging or collusion; (c) conduct site visits to assess whether the bidders executed their contracts deficiently by supplying substandard goods or inoperable equipment; and/or (d) conduct pricing research and analyses to determine if the bidders’ prices appeared to be manipulated.

The presence of indicators does not conclusively prove that a contract or project has been exposed to corrupt or fraudulent practices. Rather, the presence of indicators means that observed facts suggest an elevated risk that the contract or project may have had such exposure. Similarly, the absence of indicators does not mean that a project or contract has not been exposed to fraud and corruption. Because fraudulent and corrupt acts are illegal and usually covert, a lack of observable indicators provides no guarantee that they did not occur.

An abundance of indicators is an important finding, because a high number and/or diverse set of indicators appearing across multiple contracts signal possible widespread and systemic procurement or implementation problems. However, all indicators should be assessed in light of their type, strength, prevalence, and interrelationship with other indicators. DIR findings should be considered as a whole, and in the context of the project’s implementation, reports, and assessments, in order to identify the vulnerabilities in the project’s design and implementation. Absent additional investigation or analysis, specific DIR findings should not be statistically extrapolated across projects, sectors, or country loan portfolios because projects often vary in ways that affect DIR findings, including project design, controls, and implementing bodies. Any corrective actions taken on the basis of DIR findings should be guided by a holistic and fully contextualized reading of those findings.

**The India DIR Effort**

The India DIR sought to answer the following questions:
To what extent do the five reviewed projects exhibit indicators of fraud and corruption?

Do the projects exhibit implementation deficiencies that relate to any observed indicators of fraud and corruption?

How well did the Bank's project supervision and internal controls identify and respond to indicators of fraud and corruption? Are there areas for improvement?

Two key factors made the India DIR far more complex and resource-intensive than past DIRs. First, the India DIR was simply larger in scale and scope than previous DIRs. It involved the review of a greater number of contracts and field visits to more locations across a more expansive and logistically challenging territory. Second, the India DIR's methodology was expanded to incorporate additional forensic data analysis techniques, a larger number of analytic tests and procedures, and even more rigorous validation and quality assurance procedures. The DIR took these steps to observe indicators of fraud and corruption unidentified by previous DIRs, and to integrate its findings with an analysis of Bank project supervision and evaluation procedures, in order to increase the usefulness of its findings and observations.

The India DIR began in mid-2006 and involved over 75 Bank staff, consultants, and subject matter experts. The DIR team consisted of professionals from a large range of disciplines, including investigators, forensic accountants, information technology specialists and analysts, procurement and financial management specialists, doctors, engineers, and attorneys, as well as support staff provided by the Bank's India country office in New Delhi. The DIR team operated from a dedicated office space, located near the Bank's India country office, which the country office provided and refurbished specifically for the DIR.

The India DIR's examination of procurement encompassed: (a) collecting and analyzing data regarding 100 percent of the 835 available international competitive bidding (ICB) and national competitive bidding (NCB) contracts procured by the Procurement Support Agencies (PSAs) relating to the five projects; (b) performing in-depth reviews of 100 percent of the available ICB and NCB contracts for the FDCBP, NACP II, MCP, and TCP, as well as a selection of the nearly 500 OHSDP contracts; (c) collecting data regarding 100 percent of the 14,400 decentrally procured contracts available; and (d) reviewing a selection of those contracts...
decentrally procured contracts—chosen by project, district, and value—for indicators of fraud and corruption.

The India DIR involved constructing and populating a large database of procurement and contract data; collecting and reviewing thousands of project procurement files, hundreds of complaints, and volumes of project documents; interviewing many witnesses, suppliers, and project staff; visiting over 100 locations across five Indian states; and documenting field observations in thousands of digital photographs and several hours of digital video. In addition, the DIR team also drafted a series of hierarchical reports documenting the DIR’s findings, which include analytical tables and charts, photographs, scanned copies of significant documents, and the work of subject matter experts.

Reviewed Projects

The DIR selected five health projects for review. All five projects addressed some of India’s most pressing and urgent health issues and needs, making their successful implementation extremely important. Their objectives and details, and the reasons why the Bank selected them for review, are as follows:

Food and Drug Capacity Building Project

The FDCBP sought to improve the quality and safety of the products of India’s rapidly growing food and drugs industries by building or renovating food and drug testing laboratories, providing adequate laboratory equipment, and training laboratory technicians to use the provided equipment. The project, currently in its fourth year, is financed by a USD 54 million IDA credit that became effective on October 17, 2003, and is scheduled to close on June 30, 2008. The Bank included the FDCBP in the DIR because: (a) the project was ongoing; and (b) it contained a large civil works component—an area that the Bank has found to be vulnerable to fraud and corruption in other projects.

Orissa Health Systems Development Project

The OHSDP was a state-level project that sought to improve the health of the people of the eastern state of Orissa. At the time of the project’s 1998 launch, Orissa was considered one of the least-developed states in India: 44 percent of its population lived below the poverty line, and it had one of the highest infant mortality rates in the country. The OHSDP planned to address these issues by constructing or renovating many of the state’s healthcare facilities, supplying them with additional medical equipment, and improving the state’s health system policies. The project
was financed by a USD 82.1 million International Development Association (IDA) credit that became effective on September 8, 1998, and closed on March 31, 2006. The Bank included the OHSDP in the DIR because: (a) the Bank’s investigation into the RCH project identified it as possibly tainted by fraud and corruption; (b) the DIR sought to include a state-level project in its scope to augment its other national projects; and (c) a successor project had been proposed within the Bank.

Second National AIDS Control Project

The NACP II, a successor to the Bank’s first National AIDS Control Project, aimed to reduce the spread of HIV infection in India and strengthen the country’s capacity to respond to HIV/AIDS. At the time of the project’s 1999 launch, it was estimated that several million Indians were infected with HIV and the Bank was concerned that, without continued efforts to stem a growing infection rate, India could follow in the footsteps of some of the worst HIV/AIDS-affected countries in Africa. Under NACP II, the AIDS control strategy shifted from raising global awareness to changing behavior through targeted interventions—often conducted by non-governmental organizations (NGOs)—in which high-risk groups were identified and provided with counseling, condoms, and treatment for sexually transmitted infections. The project was financed by a USD 193.7 million IDA credit that became effective in September 11, 1999, and closed on March 31, 2006. The Bank included the NACP II in the DIR because: (a) the Bank’s RCH investigation identified it as at risk of exposure to fraud and corruption; (b) its design and scope were similar to a Kenya HIV/AIDS project that a past DIR found to exhibit indicators of fraud and corruption; (c) it followed a design model that the Bank was replicating in many countries; and (d) it had a successor project (the Third National AIDS Control Project) in the Bank’s project pipeline.

Malaria Control Project

The MCP sought to assist India’s National Malaria Eradication Program by introducing a more strategic and effective set of mechanisms to control malaria. Malaria causes substantial death, morbidity, and related social and economic losses in India, especially among the rural poor. The MCP’s malaria control efforts included providing malaria prevention mechanisms, such as insecticide-treated bed nets and larvivorous fish, and introducing early detection and treatment strategies. The project was financed by a USD 114 million IDA credit that became effective on October 27, 1997, and closed on December 31, 2005. The Bank included the MCP in the DIR because: (a) the Bank’s RCH investigation identified it as pos-
sibly tainted by fraud and corruption; and (b) it had a successor project (the Vector Borne Disease Control Project) in the Bank's project pipeline.

**Tuberculosis Control Project**

The TCP sought to support India's National Tuberculosis Control Program. At the time of the TCP's 1997 launch, it was estimated that up to half of India's population was infected with tuberculosis, and the Indian Government had just successfully piloted its Directly Observed Treatment – Short Course (DOTS) approach in which the patient is accurately diagnosed using high-quality sputum microscopy, assigned a pre-packaged medical treatment pack, and administered directly observed treatment for six to eight months with strict follow-up, supervision, and monitoring. The Bank expected DOTS to greatly reduce TB-caused mortality and disability. The project was financed by a USD 124.8 million IDA credit that became effective on May 8, 1997, and closed on March 31, 2006. The Bank included the TCP in the DIR because: (a) the Bank's RCH investigation identified it as possibly tainted by fraud and corruption; and (b) it had a successor project (the Second National Tuberculosis Control Project) in the Bank's project pipeline.

---

**II. Summary of Findings**

The DIR found indications that fraud and corruption affected all five of the projects to varying degrees and at varying stages. Indicators occurred most consistently in decentralized procurement—an area that neither the Bank nor its Borrowers supervise adequately. The DIR also found that the Bank's project supervision and evaluation systems generally failed to identify, convey, and address indicators of fraud and corruption. However, the DIR did find limited, but positive, indications of projects with well-functioning anti-corruption controls.

The DIR's findings are consistent with the findings of a number of other Bank investigations and reports, including:

- The Bank's 2005 RCH investigation, which found systemic fraud and corruption in the RCH project and the risk of similar patterns in other India health projects;
- The 2006 PricewaterhouseCoopers review of the Bank's New Delhi procurement hub, which found, among other things: (a) insufficient evalu-
ation of project fraud and corruption risks, particularly given the Bank’s delegation of final responsibility to the Borrower; (b) a failure to gather and analyze complaint and other data to identify fraud and corruption schemes; and (c) a general failure to exercise its fiduciary function in a manner that could prevent fraud and corruption in procurement; and

- The June 2007 Bank Internal Audit Department (IAD) Report on Key Audit Issues Affecting Trust Funds, which noted failures to comply with Bank procurement rules, Bank inaction on collusion indicators identified in procurement post-reviews, and inadequate auditing of project disbursements.

In brief, the DIR’s findings regarding each of the five reviewed projects are as follows:

**Food and Drug Capacity Building Project**

The DIR’s review of the FDCBP found:

1. indicators of corrupt and fraudulent practices in the procurement and implementation of equipment and civil works, such as inconsistent treatment of bidders, submission of fraudulent documentation, and inappropriate rejection of bidders;

2. widespread deficiencies in the implementation of equipment and civil works, such as payment for incomplete civil works and uninstalled equipment; and

3. weaknesses in the Bank’s identification and handling of these indicators and deficiencies.

The DIR examined FDCBP laboratory and office equipment contracts procured by the PSA through ICB and NCB procedures. The DIR found questionable procurement practices, some of which indicate fraud and corruption, in contracts representing 87 percent of the number of pieces and 88 percent of the total value of equipment procured. However, the DIR noted that none of its findings suggest the existence of cartels or collusive behavior between bidders.

The DIR found inconsistencies in the administration of the procurement process in the selection of suppliers, such as in determining whether a specific item met specifications, or in choosing to seek clarifications from some substantially responsive bidders and not others. The DIR also found indicators related to gov-
ernment interference with the procurement process, such as unreasonable delays in the award of contracts, shifting bidding deadlines and requirements, and narrowly drafted tenders. Procurement officials appeared to have employed favoritism when awarding contracts to bidders that failed to meet performance criteria while disqualifying other bidders that apparently met, or could have met, the criteria. In addition, the DIR found potentially fraudulent documents submitted by winning bidders, such as forged performance certificates, that, in some cases, were corroborated by complaints by other bidders.

Under the FDCBP, the DIR observed an occasional unusual method in which bids were evaluated and recommended for contracts. Typically, contract awards are based on the bid evaluation report (BER) and recommendations of the Bid Evaluation Committee (BEC) under the auspices of the project’s PSA. Yet, for at least three tenders of equipment, the Ministry of Health and Family Welfare (MOHFW) installed a special steering committee comprised of MOHFW officials, officials from the PSA, and technical experts to review bid submissions and recommend bid awards. The DIR found that the steering committee’s evaluation of bids frequently differed from that of the BEC and exhibited indicators of non-transparency, preferential treatment, and other corrupt and inconsistent practices. Further, the MOHFW always followed the steering committee’s recommendations, repeatedly overruling the BEC.

The DIR found indicators of fraudulent and corrupt practices in a third of the civil works procurements that it reviewed. For example, the DIR noted the PSA’s unsupported disqualification of a qualified lower cost bidder, as well as the awarding of contracts to companies that submitted false or non-compliant bidding documentation.

Most of the contracts exhibiting indicators of corrupt practices in the DIR’s procurement review also had implementation deficiencies. The DIR found widespread deficiencies in the delivery, installation, use, training, or maintenance of equipment at all 15 of the food and drug laboratories and MOHFW regional offices that it visited. For example, more than half of the 282 pieces of equipment procured for the visited laboratories were undelivered or uninstalled. The DIR also found improperly installed equipment, damaged equipment, and the delivery of unneeded and unused equipment. In addition, the DIR found many instances where suppliers did not provide the required training and demonstrations or meet warranty commitments to repair broken or damaged equipment.
The DIR found that substantial payment had been issued for almost half of the contracts where equipment was undelivered, delivered in a damaged state, or delivered with missing parts.

Moreover, the DIR found widespread deficiencies in all nine civil works sites visited. Deficiencies included significant electrical, water supply, and infrastructure problems and issues related to water damage, concrete, general construction, poor quality of materials, and general maintenance. Many sites would require additional work to conform with tender requirements. Nonetheless, despite these implementation deficiencies, in some cases the PSA provided contractors with completion certificates that allowed full payment for unfinished or deficient work.

The DIR found that the FDCBP's reports and assessments produced to date do not adequately convey the high rate of procurement and implementation problems and deficiencies afflicting the project. The DIR found that the Bank's handling of such issues thus far has significant shortcomings. To its credit, the Bank identified problems in the administration of the procurement processes in some cases. However, the Bank still gave its No Objection to the award of these contracts, even though the problems appear not to have been remedied. Furthermore, the Bank apparently has conducted only one procurement post-review in the four years that the project has been effective. While noting some deficiencies in the implementation of civil works—though not to the extent observed by the DIR—the Bank nonetheless upgraded the project's implementation performance rating from unsatisfactory to moderately satisfactory in its last two aides-mémoire. When Bank officials did identify indicators of fraud and corruption, such as inconsistent administration of procurements that favored certain bidders or patterns of unreasonable procurement delays, they did not pursue the issue with sufficient rigor, resulting in the matter remaining unresolved.

**Orissa Health Systems Development Project**

The DIR's review of the OHSDP found that:

1. the implementation and procurement of the OHSDP's civil works and equipment components exhibited significant indicators of fraud, including severe construction deficiencies in buildings that construction supervisors certified as complete and up to specification; and 17 types of equipment that, while purportedly in compliance with technical standards, were found noncompliant or hazardous upon basic inspection;
2. there is a risk of fraud and corruption because the project audit reports identified several areas of inadequate project financial management and financial recordkeeping but did not provide a complete and transparent accounting of project expenditures; and

3. the Bank observed some of these problems in its project supervision, but its reliance on apparently incorrect Borrower-provided data appears to have delayed these observations until the project was nearly closed and it was too late to address the problems.

Implementation of the OHSDP’s civil works and equipment components also exhibited significant indicators of fraud. For civil works, the DIR, aided by a civil engineer, visited 55 project hospitals; at 93 percent of them, it observed problems like uninitiated or incomplete work, severely leaking roofs, crumbling ceilings, molding walls, and non-functional water, sewage, and/or electrical systems. Four hospitals were locked shut and entirely unused. Yet the construction management consultants (CMCs) who supervised the work certified 38 of these hospitals to be complete to project specifications, and in February 2006 the Orissa Department of Health and Family Welfare (DOHFW) reported that work at 45 of them was complete. The DIR reviewed the project documents for 21 hospitals and found 10 cases in which the DIR’s field observations directly contradicted the CMC’s completion certifications.

For equipment, the DIR, aided by a biomedical engineer, inspected equipment at project hospitals and identified 17 types of equipment that violated project technical specifications, including five types of equipment that were hazardous. Hazardous equipment included autoclaves (hot steam surgical equipment sterilizers) that could explode and neonatal equipment that lacked adequate electrical grounding, potentially exposing babies and their medical staff to electrical shocks. These units were procured from firms whose bids either omitted required technical compliance certificates or contained certificates that appeared fraudulent. Yet ELMARC, the firm responsible for evaluating these bids and inspecting procured equipment, not only overlooked these problems, but also failed to respond to equipment quality complaints sent to them by medical officers, and oversupplied substantial amounts of equipment.

Consistent with findings of fraud in implementation, the OHSDP’s civil works and equipment procurements also exhibited indicators of fraud and bid rigging. In civil works, the DOHFW conducted 12 tenders to hire architects and CMCs to design, procure, and supervise the works; nine of these tenders exhibited indica-
tors of bid rigging. Indicators of fraud and bid rigging in the construction services procurements included very low competition for contracts; the exclusion of low-priced bidders in 25 percent of tenders; and contract prices that exceeded cost estimates in 80 percent of tenders. In equipment procurement, ELMARC appeared to have favored certain bidders by overlooking only some firms’ omitted documentation or permitting only certain firms to amend their otherwise losing bids.

The DIR’s analysis of the project’s reports and assessments resulted in both positive and negative findings. The Bank’s financial management specialists appear to have been diligent in pursuing problems regarding project audit reports, though these issues remain unresolved. However, none of the OHSDP’s project design documents mentioned fraud and corruption as a project risk or detailed how the Bank would supervise the decentralized project activities. Instead, the Bank followed its stated policy of delegating almost all project monitoring and evaluation to the Borrower, and thus relied on the DOHFW to report project progress accurately.

The DIR’s review of the Orissa Auditor General’s OHSDP audit reports identified weaknesses in the project’s financial management and recordkeeping that created a risk of fraud and corruption. The audit reports did not provide a timely, complete, and transparent review of project expenditures—so much so that the Bank is still awaiting audit certification of more than USD 30 million in Bank-reimbursed project expenditures. The audits also stated that the project routinely spent far less than it requested in its budget; its certified civil works expenditures did not match reported civil works activity; and its financial records lacked proper balances, which are an important protection against fraudulent transactions.

The DIR’s project implementation findings suggest that the DOHFW either was unaware of the project’s problems or chose not to report them to the Bank. The Bank eventually observed and documented some of the civil works and equipment problems that the DIR identified as indicators of underlying fraud. However, because the Bank waited until the project’s final year to conduct extensive field visits and verify the quality of reported project outputs, the institution did not learn of these problems until it was too late to remedy them. This indicates a weakness in the Bank’s supervision methodology that, according to project design documents, has not been addressed in subsequent India state health projects. The OHSDP’s overall rating of “moderately satisfactory” also stands in stark contrast to the significant civil works and equipment problems observed by the DIR. As the Bank’s project supervision team itself wrote, this suggests that the Bank’s project evalua-
tion metrics may place too much emphasis on statistical indicators of development effect, and too little emphasis on project outputs.

**Second National HIV/AIDS Control Project**

The DIR’s review of the NACP II found:

1. indicators of corrupt practices in contract awards to NGOs, such as fictitious NGOs receiving contracts and government officials receiving bribes, as well as a lack of meaningful controls for tracking disbursements to NGOs;

2. deficiencies in the implementation of test kit and blood bank equipment contracts, such as poorly performing test kits and non-functioning equipment;

3. indicators of fraudulent and corrupt practices in the procurement of diagnostic test kits and blood bank equipment—particularly when conducted through decentralized procurement—such as similar bid prices and affiliated bidders; and

4. that while the Bank observed and initiated action on some issues subsequently identified by the DIR as indicators of fraud and corruption, its observations and actions were not always timely and not classified as possible signs of fraud and corruption.

The DIR found that the NACP II’s selection and oversight of NGOs, which the Bank relied on as the delivery mechanisms for services, lacked meaningful financial controls and transparency, thus creating the potential for corrupt practices. Under NACP II, USD 72.5 million was allocated to service-oriented activities, such as targeted interventions and workshops, a substantial portion of which were carried out by NGOs. These funds were typically disbursed in advance by local-level officials in amounts that were less than USD 20,000. In certain cases, however, these officials failed to track many of these expenditures, putting the distribution and use of these funds at significant risk. The DIR received reports from NGOs that procurement officials demanded and received bribes in exchange for awarding contracts to NGOs. The DIR found that many NGOs that received project contracts were not qualified to perform HIV/AIDS prevention services, and some did not even exist. Some NGOs also submitted falsified documentation to
support the work they were purportedly doing. The DIR’s findings were corroborated by anonymous complaints to the Bank and news reports.

The DIR’s examination of the implementation of diagnostic test kit and blood bank equipment contracts revealed a number of problems. Regarding test kits, the DIR found that some of the test kits supplied by particular companies often performed poorly by producing erroneous or invalid results, potentially resulting in the further spread of disease or in the wastage of blood. While the test-kit distribution requirements were generally adhered to, the DIR discovered that inspection and cold-storage procedures were not consistently followed, and that some test kits were distributed near their expiration dates. This, along with external factors like substandard facilities, poorly trained staff, and erratic quality assurance practices, could have contributed to the test kit performance problems.

Regarding the implementation of blood bank equipment contracts, the DIR found that a number of contractors failed to properly install equipment at blood banks; delivered faulty or non-functioning equipment; and/or failed to service the equipment as required under their contracts. The DIR also observed that, in some instances, NACP II procured what appeared to be superfluous equipment.

The DIR’s examination of the NACP II’s ICB procurement of diagnostic test kits and blood bank equipment—which often involved the same firms whose goods exhibited performance problems—revealed a number of indicators of fraudulent and corrupt practices, such as: (a) long delays between the bid opening and contract award dates; (b) unusual patterns in prices submitted by bidders; (c) apparent avoidance of the Bank’s prior-review process by splitting tenders to fall below prior-review thresholds; (d) low bid submission rates; (e) preferential treatment accorded to certain bidders; and (f) unexplained expenses and possible self-dealing by the project PSAs.

The DIR also reviewed 217 locally procured contracts, valued at INR 118 million (USD 2.6 million), and found that 82 percent by number and 88 percent by value contained one or more indicators of fraudulent and corrupt practices. These contracts were primarily for the provision of diagnostic test kits, blood bank equipment, and laboratory supplies. In addition to many of the indicators detailed above, the local procurement of diagnostic test kits and blood bank equipment exhibited other indicators of fraudulent and corrupt practices, including: (a) similarities in the language and presentation of competing bids; (b) separate bidders with the same phone numbers and addresses; (c) the award of contracts to firms that did not submit bids; and (d) substantial recordkeeping deficiencies.
Early in the project, the Bank acknowledged its inability to gauge NGO performance, but it did not identify the lack of financial controls over NGO disbursements until just prior to the project’s close. To its credit, the Bank has highlighted financial controls over NGOs as a key area of reform in the NACP II’s successor project, the Third National AIDS Control Project (NACP III). The Bank appeared to pay scant attention to the performance and quality of the goods supplied to the blood banks and testing centers, instead focusing on the number of such facilities being erected. The Bank consistently identified delays in contract awards as a significant procurement problem, but attributed these delays to insufficient procurement agency capacity and did not appear to consider corrupt practices as a possible contributing factor.

**Malaria Control Project**

The DIR’s review of the MCP found:

1. widespread indicators of fraudulent and corrupt practices in the award of MCP contracts for insecticides (pyrethroids), bed nets, and pharmaceuticals, such as similar bid prices, submission of fraudulent documents, and payments to government officials;

2. indicators of fraudulent and corrupt practices—such as rotation of contract winners, bidders with identical phone numbers, and similarities in the text and layout of bids—affecting the award of 73 percent (by volume) and 50 percent (by value) of DIR-reviewed contracts procured through decentralized procurement; and

3. that the Bank’s project reports and assessments did not fully identify, convey, or address the widespread indicators of collusion and fraud affecting the project.

The DIR found indicators of widespread corrupt practices in the award of MCP centrally procured contracts, most notably indicators of bid rigging and collusion. The indicators were pervasive throughout the project’s major areas of procurement—pyrethroids, bed nets, and pharmaceuticals—and persisted for most of the years of the project. Nestor Pharmaceuticals Limited (Nestor) and Pure Pharma Limited (Pure Pharma), two firms recently debarred by the Bank for collusive practices under the RCH project, were found to exhibit indicators of collusive behavior under the MCP. The DIR also found indicators of bid rigging, payment of bribes, and other forms of fraud and corruption in the bidding process and
award of contracts, including contracts procured centrally by the project’s PSA and locally by the project’s various district malaria offices. The indicators tend to show that fair and open competition for contracts was adversely harmed and prices, at times, appeared to be inflated.

In the procurement of pyrethroids, the largest component of the MCP in terms of dollar value, the DIR found numerous indicators that four firms colluded to divide over 90 percent of the value of the contracts among themselves. The indicators were consistent with those previously recognized by the Bank’s Sanctions Board to be indicators of collusive behavior, such as the submission of identical bid prices. There are indicators that suggest that the collusive behavior subverted open competition, resulted in inflated prices, and likely involved individuals within the project’s PSA. Noteworthy is the sudden disappearance of these indicators for the final two pyrethroid tenders, the reasons for which are not entirely clear. The DIR also found indicators that the Government of India’s Central Insecticide Board (CIB) may have engaged in corrupt practices in the granting of licenses to sell pyrethroids in India.

Similarly, for the procurement of bed nets, the DIR found that five of the seven suppliers either exhibited indicators of collusive or corrupt behavior or otherwise performed in a manner that adversely affected project implementation. The DIR found indicators that a group of four firms bidding for bed net contracts were interrelated through familial connections and may have colluded (with the help of two other firms) to receive contracts. It also found numerous indicators of poor product quality in the bed nets supplied by the firms.

In the procurement of pharmaceuticals, the DIR found indicators suggesting that Nestor and Pure Pharma—as found in the RCH investigation—may have colluded in order to win the majority of contracts for chloroquine and combi-blister packs.

The DIR’s review of contracts procured by two district malaria offices found widespread indicators of fraud and corruption affecting the procurement of 73 percent of the volume (50 percent of total value) of those two districts’ 50 largest contracts. The high indicator rate warrants attention because of the large amount of project funds utilized in this manner (approximately 40 percent of the MCP’s total project funds) and the low level of supervision by both the Borrower and the Bank.

Finally, the DIR’s review of the project’s reports and assessments found that the Bank and the Borrower did not fully identify, convey, or address the wide-
spread indicators of collusion and fraud affecting the project. Whenever indicators of possible fraud or collusion were identified, it is unclear what, if anything, was done by the Bank or Borrower to remedy the situation. More significantly, the Bank's project supervision systems largely did not detect the probable collusive rings. While the Bank's final project evaluation was forthright in belatedly noting project implementation issues, the Bank's reliance on epidemiological statistics to evaluate project outcomes meant that the MCP's overall success rating did not reflect fully the project’s implementation difficulties, which may have been at least partially caused by fraud and corruption.

Tuberculosis Control Project

The DIR's review of the TCP found that:

1. the implementation of pharmaceuticals and equipment purchased under the TCP generally demonstrated proper supply, good quality, and few deficiencies in the project's supply and distribution chains. However, the DIR observed significant indicators of collusion in the ICB procurement of pharmaceuticals that went undetected by the Borrower. These indicators included identical or nearly identical unit prices, attempted bid rotation, and attempted division of the market between two firms. This collusion was unsuccessful only because the apparently colluding firms were deregistered on other grounds and disqualified from the tenders;

2. decentralized procurements revealed widespread indicators of collusion, fraud, and corruption, such as strong similarities between competing bids language and/or presentation, bidders with identical phone numbers, and related bid prices; and

3. the Bank's project reports and assessments revealed that while the Bank's response to complaints was adequate, its response to the findings in other project reports was inadequate.

The DIR's review of TCP's implementation and distribution of pharmaceutical and equipment purchases in four states and 12 districts—accounting for 40 percent of TCP Bank funds—revealed generally proper supply, good quality, and few deficiencies in the project's supply and distribution chains. In contrast, the DIR uncovered a number of indicators of corrupt practices associated with the centralized procurement of pharmaceuticals through ICB processes. In particular, the DIR found strong indicators of collusive behavior between two suppliers,
Nestor Pharmaceuticals Limited and Pure Pharma Limited—companies recently debarred by the Bank for collusive practices on another India health sector project ongoing during the same period. Because these collusive practices apparently went undetected and apparently were undertaken by the same players across multiple projects, they signify a risk factor that needs to be monitored closely to ensure program integrity in the TCP’s successor project and other projects involving pharmaceutical procurements.

Among the numerous indicators found, the DIR discovered indicators that these companies engaged in collusive practices on at least five invitations for bids through the submission of identical unit prices and complementary quantities that would potentially lead to contract splitting or contract award rotation. Although these companies were the lowest evaluated bidders on contracts worth millions of dollars, an unrelated decision by the Government of India to “deregister” these two companies because they provided substandard drugs prevented their schemes from fully manifesting. Nevertheless, had the deregistration not occurred, it is likely these companies would have succeeded in their scheme because the indicators of fraud apparently went undetected.

In contrast to the centrally procured pharmaceutical and equipment purchases, the DIR’s review of procurement by the state and district tuberculosis offices revealed a high percentage of procurements showing indicators of collusion, fraud, or corruption (i.e., 100 of 143 local shopping contract files, or 70 percent in number and 78 percent in value of the DIR reviewed contracts). Among the dozens of collusive indicators were strong similarities in competing bids’ language and presentation, bidders sharing the same addresses and telephone numbers, unit prices showing a common formula, and indicators of intent to split contract awards among several bidders. Included among the indicators of fraud or corruption were signs of potential document tampering, quotations submitted after the submission deadline, and substantial recordkeeping deficiencies. Procurements conducted under prior review thresholds are particularly susceptible to fraudulent and corrupt practices and, while the Bank’s procurement post-review identified a number of indicators of fraud, collusion, or corruption, the DIR found no evidence that the Bank had taken any affirmative action to address the indicators identified or mitigate ongoing risks in this area.

The DIR’s analysis of the Bank’s project reports and assessments resulted in both positive and negative findings. On the one hand, the DIR found that the Bank appeared to have responded adequately to specific complaints from firms relat-
ing to TCP procurement and implementation. In general those complaints were investigated and resolved. On the other hand, while TCP audit reports, procurement post-reviews, financial reviews, and the Implementation Completion Report (ICR) identified indicators of possible fraud, corruption, and collusion, there is no indication that the Bank acted with rigor to investigate or rectify those problems.
INTRODUCTION

The Objectives and Methodology of The Detailed Implementation Review

Risks of Fraud and Corruption in Bank-Financed Projects

It is well recognized that fraud and corruption conflict with the Bank’s interests as a development institution.\(^1\) Across the globe, development institutions are increasingly recognizing that fraud and corruption, even in minor instances, have serious, detrimental effects on their projects and on the achievement of their development objectives.\(^2\)

Under the Bank’s lending model, the Borrower is responsible for managing the implementation of a Bank-financed project. The Bank delegates direct control over many aspects of contract procurement and implementation to the Borrower and its agents. This can impose additional risks to Bank funds, as it eliminates the Bank’s ability to directly and pro-actively manage and control, for example, the technical evaluation of competing bid proposals, the selection of vendors using shopping procedures, and the inspection and approval of all delivered goods.

---

\(^1\) See, e.g., Joint Ministerial Committee of the Board of Governors of the Bank and the Fund on the Transfer of Real Resources to Developing Countries, Development Committee Communiqué, para. 6 (Apr. 23, 2006); see also Joint Ministerial Committee of the Board of Governors of the Bank and the Fund on the Transfer of Real Resources to Developing Countries, Development Committee Communiqué, para. 8 (Sept. 18, 2006).

\(^2\) See, e.g., World Bank Group, Strengthening World Bank Group Engagement in Governance and Anticorruption, para. 3 (Mar. 21, 2007), which observes, “While weak governance and corruption are hardly unique to developing countries, their impact on poverty and growth is particularly devastating. On a daily basis, poor people around the world cannot access health clinics, schools, or other essential services because their public systems are unresponsive, or because they themselves cannot or will not pay bribes…improving governance and reducing corruption are crucial for helping poor people to escape poverty and countries to achieve the Millennium Development Goals.”
These risks are not inconsequential, as the damage inflicted by corrupt and fraudulent practices on a project’s development objectives can be considerable. Contrary to the Bank’s mission, corrupt government officials and willing suppliers (and sometimes Bank staff) seek self-enrichment, misusing and diverting precious funds meant for project implementation and denying the project the full complement of the very goods and services needed for the fulfillment of its development objectives.

The Detailed Implementation Review

The Detailed Implementation Review (DIR) is a proactive diagnostic tool developed by the Bank’s Department of Institutional Integrity (INT) in 2001 to evaluate Bank-financed projects for indicators of fraudulent and corrupt activities. It utilizes a holistic and flexible approach to identify past actions and activities by project implementation units (or specialized procurement agencies), suppliers and contractors, and others that indicate the potential misuse or diversion of project funds and compromised project outputs.

The DIR is performed by a highly specialized team of INT investigators, forensic accountants, IT specialists, and analysts, as well as procurement and financial management specialists, lawyers, engineers, and implementation specialists from within the Bank or industry. It may include Bank operational staff from a variety of disciplines, and Bank staff from the relevant Country Office, as needed.

Although sharing some similarities in the use of widely-accepted computerized and manual forensic audit and investigative techniques, the DIR is not an investigation that aims to substantiate specific allegations of fraud and corruption for purposes of Bank administrative actions or proceedings. In contrast, the DIR has a broader objective to assess whether a project’s various contracting and implementation processes and activities exhibit indicators, or “red flags,” that the project and its objectives may have been compromised by fraudulent and/or corrupt activities, and to what extent. The nature, patterns, and prevalence of these indicators pro-

---

3 The World Bank Procurement Guidelines define corrupt and fraudulent practices as: “corrupt practice means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution; and fraudulent practice means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Borrower of the benefits of free and open competition.” Guidelines: Procurement Under IBRD Loans and IDA Credits, para. 1.15 (1999). For ease of reference in this Report, the use of the terms “corrupt practices” or “corrupt activities” are each inclusive of the corrupt and fraudulent practices as defined by the Bank’s Guidelines.
vide the basis for remedial action by the country and the Bank. The concept and use of indicators is discussed in more depth below.

In addition, the DIR provides a general assessment of the project’s contracting processes as well as its vulnerabilities to fraud and corruption. It also provides an assessment of how and to what extent the project’s standard reports, assessments, and supervisory functions captured and addressed the problems identified by the DIR. Furthermore, the DIR identifies specific contracts, suppliers, organizations, and individuals that warrant further investigation by the Bank or the Borrower.

**DIR Approach and Methodology**

Past DIRs and INT investigations have demonstrated how fraud and corruption can result in detrimental implementation of project outputs. A Bank-financed project undergoes careful planning and design in order to determine, in much detail, the goods, works, and services it needs to fulfill its development and implementation objectives, whether it is the delivery of medicines, vaccines, spectroscopes, or public awareness campaigns or the construction of health clinics in remote villages. Fraud and corruption, however, divert funds directly away from their intended purpose, meaning that the project’s intended and planned procurement of goods and services—the quality, quantity, and overall value of the items—is inherently compromised. At risk are the benefits to the project’s intended beneficiaries.

The DIR is based on the premise that damage inflicted by fraud and corruption on a project’s development and implementation objectives can be considerable, as its cost is seldom absorbed by its participants. Rather, the actors paying the bribe or kickback—that is, suppliers of goods, works, or services—seek ways to cover the cost of fraud and corruption by extracting from the contract additional economic profits, or margins, over and above what is usually earned under competitive circumstances. This is accomplished by either raising contract receipts (i.e., inflating the price of goods) or lowering contract costs. Contract costs generally are lowered by reducing product or service quality or short-changing their quantity. Either method diverts funds from their intended purpose.

The DIR is a robust combination of in-depth reviews of project documents, procurement data, financial records, complaints, and other information. It also employs computerized data mining and analytics, data research, site visits, quality testing of goods, and interviews. Using widely accepted methodologies, it selects for its review a sufficient number of tenders, awarded contracts, and field locations
in order to render a meaningful conclusion. The DIR looks for any consequential event, document, pattern of activity, object, statement, correlation, or observation—that indicates, suggests, or creates a substantially increased risk that fraudulent and corrupt activities have occurred and that project funds have been misused or diverted. The DIR terms these criteria as “indicators” of fraudulent and corrupt activities. The DIR’s use of indicators is consistent with that commonly used by national, state, and local law enforcement, as well as specialized audit agencies and the professional fraud control community.

The DIR is conducted on Bank-financed projects believed to be at high risk from fraud and corruption. Generally, projects subject to review are selected in conjunction with the Country Office (CO). Criteria considered for selection include: (1) allegations or findings of fraud and corruption from previous assessments, reviews, or investigations; (2) well-advanced implementation of multiple types of goods, works, and/or services; (3) upcoming successor projects that may be exposed to the same high risks; and (4) multiple procurement methodologies including international competitive bidding (ICB), national competitive bidding (NCB), and shopping procedures. These criteria may be adjusted depending on the conditions and needs of the CO and Borrower. Also, other projects not adhering to the criteria may be included as part of the review at the request of the CO or Borrower.

The India DIR is the sixth DIR completed by the Bank.

**DIR Components and Phases**

The DIR integrates information from multiple information sources in order to best validate and support its findings and to maximize its discovery of patterns, links, schemes, and inconsistencies that may point to fraud and corruption. Furthermore, the DIR’s methodology is designed to reveal a variety of indicators at various stages along the contract’s life cycle from bid advertisement to final disbursement. For example, the identification of sequentially-numbered bid securi-

---

4 The threshold for sufficiency may be met either through a single indicator, or through a combination of several indicators, depending upon the seriousness of the indicator(s) found.


ties from different bidders initiates additional computer data analyses to identify other links or patterns connecting the suspect bidders. Procurement records are then reviewed to determine whether bidders may have influenced the outcome of the procurement process through indicators of bid rigging or collusion, or are operating as a cartel. Site visits are conducted to determine, for example, if implementation was deficient through the supply of substandard goods or inoperable equipment. Pricing research and analyses may be conducted to determine if prices were manipulated.

Accordingly, as described in Table 1, the DIR is a multi-phased process flexibly designed to adapt to unique project requirements, additional challenges and changing conditions. It is not confined to a rigid checklist of pre-defined steps and procedures that may hinder its reviewers from fully exploiting inconspicuous evidence that often exposes the subtle nature and nuances of fraudulent and corrupt activities and informative indicators. It continually updates its methodology and approach with lessons learned from each prior DIR.

**Table 1: Phases of a Detailed Implementation Review**

| Proposal and Planning | Bank initiation of DIR  
|-----------------------|--------------------------  
|                       | Conduct feasibility study (time, cost, resource requirements, data availability, and access)  
|                       | Determine scope and number of projects  
|                       | Determine availability of documents and resolve challenges  
| Collection and Review of Project Data and Documents | Obtain procurement data and contracts, and electronic data sets (as applicable)  
|                       | Obtain and review background and contextual documents such as PADs, ICRs, credit agreements, and related correspondence  
| Data Mining and Analytics | Load or key contract data into a database  
|                       | Quality control and normalize the data  
|                       | Perform data mining and analytics in search of indicators  
| Review of Procurement | Review individual and packages of contracts  
|                       | Conclude reviews of a selection of shopping contracts  
|                       | Assess data analytics results and indicators  
|                       | Document findings in Working Case Memos (WCMs)  
|                       | Prepare the risk rating (high, medium, low) for contracts with indicators, and recommend contracts for site visits  

*continued*
### Review of Implementation (Site Visits)
- Determine which sites are to be visited
- Conduct site visits, interview on-site project personnel, obtain photographs and video
- Document findings in WCMs
- Further computer analysis of data based on new data developed by the visits

### Review of Financial Management
- Conduct limited review of financial management (FM) function and controls
- Review FM documents; interview FM staff
- Analyze disbursements to suppliers on contracts exhibiting indicators
- Document findings in WCMs

### Review of Complaints
- Review INT records for previous investigations
- Review Bank databases for filed complaints
- Obtain and review complaints filed with region

### Review of Project Reports and Assessments
- Obtain and review primary project reports and assessments, such as ISRs, aides-mémoire, procurement reviews, and audit reports
- Assess Bank’s identification and assessment of relevant issues and actions taken

### Final Analysis and Report
- Prepare summary reports of findings for each project reviewed, including preparation of supporting charts, tables, photo logs
- Prepare final report of findings, observations, and considerations
- Evaluate lessons learned to improve best practices for future DIRs
- Brief representatives of INT, Region, and the Borrower regarding the need for additional inquiry and investigation, as appropriate

---

**DIR’s Use of Indicators**

The DIR distinguishes between different types of indicators. The DIR’s portfolio of pre-defined indicators has been categorized into levels of hierarchy based on the indicator’s type and its relative value (or weight) as an indication of fraudulent and corrupt activities. Each level is then sub-divided, as needed, again based on the indicator’s type and evidentiary value.

Level One indicators carry the most evidentiary value to the DIR. Empirically, these represent evidence and facts that—if validated—directly demonstrate or indicate that fraudulent and corrupt activities have, in fact, occurred. These indicators are broadly represented by two sub-groups: (1) oral or written admis-
ions of corrupt or fraudulent practices (e.g., admitting to paying a bribe or being solicited to do so) by winning, losing, or interested bidders, project officials or consultants, or Bank staff or consultants; and (2) objective facts demonstrating that corrupt or fraudulent practices have or very likely have occurred, such as forged invoices, counterfeit or sub-standard goods, under-delivery of product quantities, written communications and e-mails, falsified completion certificates, and cancelled checks.

Level Two indicators are objective facts that empirically indicate with a high likelihood the presence of fraudulent and corrupt activities. Indicators at this level are sub-divided into four groups: (1) indicators of corrupt or fraudulent practices in a particular contract, such as separate bidders sharing common addresses or officials, or bidders with sequential or similar bid security serial numbers from the same bank on or about the same date; (2) objective facts that indicate the presence of a cartel (collusion among bidders); (3) objective facts or patterns that indicate bid rigging between a bidder and the Bid Evaluation Committee; and (4) suspicious practices and patterns by the project’s implementation unit or related support agencies.

Level Three indicators are facts and evidence that when present represent an increased risk of possible corrupt or fraudulent practices. Level Three indicators point to factors that demonstrate increased opportunities for these activities to have occurred, such as weak controls or failure to follow strict procedures. Generally, these indicators, unlike Level One and Level Two indicators, do not by themselves provide strong indications of possible fraudulent and corrupt activities, but when taken together generally increase the likelihood of fraudulent and corrupt activities.

**Interpretation of DIR Findings**

The presence of indicators does not conclusively prove that a contract or project has been exposed to corrupt or fraudulent practices. Rather, the presence of indicators means that observed facts suggest an elevated risk that the contract or project may have had such exposure. Similarly, the absence of indicators does not mean that a project or contract has not been exposed to fraud and corruption. Because fraudulent and corrupt acts are illegal and usually covert, a lack of observable indicators provides no guarantee that they did not occur.
In addition, the number of indicators observed should not itself be overly interpreted. An abundance of indicators within or across contracts is an important finding, as a high number and/or diversity of indicators across multiple contracts signals possible wide-spread and systemic breakdowns and problems in contract procurement and implementation. However, all indicators should also be assessed in light of their type, strength, prevalence, and interrelationship with other indicators.

Moreover, a DIR generally does not include a full review of all contracts and expenditures of funds under a project; such an undertaking is impractical and unfeasible when weighing costs and productive value. Instead, it conducts its review on a selection of contracts deemed sufficient and diverse in scope, size, characteristics, procuring body and method, and other criteria to render meaningful findings, conclusions, observations, and considerations for the project as a whole.

The DIR's findings should be considered holistically—rather than narrowly on just its abundance of indicators—and in the context of the project's implementation, reports, and assessments. Doing so provides a better and more comprehensive understanding of the various types of weaknesses, vulnerabilities, fraud, and corruption that may be pervading a project's processes on the whole. It also allows for the most appropriate policy, design, and system response to systemic indicators of fraudulent and corrupt practices. Equipped with such knowledge, appropriate steps may then be taken by the country office and member country to tighten controls and procedures and reduce the risks of fraudulent and corrupt practices in future projects.

Corrective actions, however, should not be directed only at contracts exhibiting indicators. Contracts within a project not outwardly exhibiting indicators may still have been subjected to fraud and corruption, especially if operating in an environment of collusion, weak controls, and systemic mismanagement. Additional investigative steps beyond the DIR should be performed to determine whether other contracts actually were at risk or have been impacted by fraud or corruption.

Lastly, a DIR's findings in relation to all of the contracts within the Bank-financed project under review must be interpreted with appropriate consideration for the project's numerous qualitative factors, which differ significantly across projects and member countries, including the:

1. Types and proportion of contracts and procurement methods;
2. Complexity or simplicity of the contracting process;
3. Number and size of contracts;
4. Strength of the project’s financial management process and personnel as well as internal controls and vulnerabilities to fraud and corruption;

5. Quality of its documentation and record-keeping;

6. Degree of direct involvement of senior government officials in the process;

7. Quality and amount of direct supervision by Bank officials, auditors and project teams; and

8. Use of any procurement consultants or specialists.

Careful consideration of these and other important factors is important when evaluating the specific findings of one or more DIRs. These are also valid reasons for not statistically extrapolating the results of a DIR across an entire project or the member country’s entire loan portfolio.

---

**History and Background of the World Bank Lending in India Health Sector**

**India at a Glance**

The Republic of India is the world’s second most populous country and has the fourth largest economy. Its more than one billion people live across three million square kilometers of territory divided into 28 semi-autonomous States and seven Union Territories. In 2004, India’s gross domestic product (GDP) was approximately USD 3 trillion, and growing at a rapid rate, including an 8.4 percent expansion during India’s 2005–2006 fiscal year.

---


Despite this economic strength, India suffers from widespread poverty. Recent statistics indicate that India ranks 121st in the world in per capita GDP—USD 2,849—and more than 27 percent of India’s population lives below the government’s poverty line.\footnote{Government of India, National Web Portal, http://india.gov.in/knowindia.php (May 2007) (geographic, cultural, and poverty rate data); International Monetary Fund’s World Economic Outlook Database (Sept. 2007) (economic data); World Bank, India and the Knowledge Economy, Leveraging Strengths and Opportunities (2005), p. 31, http://info.worldbank.org/etools/library/latestversion.asp?235713 (GDP ranking); Government of India, Poverty Estimates for 2004–05 (Mar. 2007), planningcommission.gov.in/news/prmar07.pdf (percent of population below poverty line).} India is also home to 36 percent of the world’s people who live on less than USD 1 per day.\footnote{David H. Peters, \textit{et al.}, \textit{Better Systems for India’s Poor: Findings, Analysis, and Options}, p. 270 (World Bank 2002) (Peters).}

**India’s Health Needs**

India’s poverty causes its people to suffer a disproportionate share of the world’s health problems. India represents 17 percent of the total world population,\footnote{Population Reference Bureau, 2002 \textit{World Population Data Sheet} (2002), www.prb.org/pdf/WorldPopulationDS02_Eng.pdf.} but the World Health Organization estimates that Indians suffered 28 percent of the world’s total years lost to respiratory infections, 24 percent of the years lost to diarrheal diseases, 21 percent of the years lost to measles, 24 percent of the years lost to nutritional deficiencies, 25 percent of the years lost to tuberculosis, 26 percent of the years lost to tetanus, and 45 percent of the years lost to leprosy.\footnote{World Health Organization, \textit{Global Burden of Disease Statistics}, Table: Disability-Adjusted Life Years (DALY) 2002 (2004), http://www.who.int/healthinfo/bodestimates/en/index.html.} In addition, 47 percent of India’s children under the age of five are malnourished\footnote{Project Appraisal Document, Karnataka Health Systems Development and Reform Project, Annex 14: Country at a Glance, p. 122 (Jul. 15, 2006).} and 2.5 million of its people are living with HIV/AIDS.\footnote{UNAIDS Press Release, \textit{2.5 Million People Living with HIV in India}, (Jul. 6, 2007), www.unaids.org.in/new/default.asp}

Nonetheless, India has achieved some successes in improving its people’s health. Since 1970, India’s average life expectancy has increased by 14 years (to age 63), and since 1950, average fertility and infant mortality have dropped by approximately half.\footnote{Peters, p. 272.} However, these successes are creating new challenges because India’s aging population is suffering from a new set of chronic health conditions, such as heart disease (now the most common cause of Indian mortality) to which its health system must adapt and respond.\footnote{\textit{Ibid.}, pp. 26–28, and 271.} Health system planning is further complicated by
the wide variance in Indian states’ wealth, geography, demographics, and lifestyles, all of which affect their health needs.\textsuperscript{18}

Although India’s national health infrastructure is extensive—including over 146,000 sub-centers (for areas of up to 5,000 people), 23,236 Primary Health Centers (for areas of up to 30,000 people), and 3,346 Community Health Centers (for areas of up to 120,000 people)—India’s public health spending constitutes only one percent of its total GDP, placing it below most low-income countries and in the bottom 20 percent of all countries.\textsuperscript{19} As a result, 80 percent of India’s spending for health comes from individuals’ out-of-pocket payments at the point of service.\textsuperscript{20} The private sector accounts for 93 percent of all hospitals, 64 percent of all hospital beds, and 80 percent of all doctors nationwide.\textsuperscript{21} Only five countries—Cambodia, the Democratic Republic of Congo, Georgia, Myanmar, and Sierra Leone—rely on private health spending more than India.\textsuperscript{22}

India’s heavy reliance on private health spending causes significant financial burdens for those who use it. For example, the average patient who enters a hospital spends over 58 percent of his or her annual income on private health services.\textsuperscript{23} More than 40 percent of inpatients borrow money to cover medical expenses, and at least 25 percent of them are forced into poverty by those expenses.\textsuperscript{24} India’s reliance on private health spending also creates a “two-track” system that discriminates against the poor by shunting them to inadequately funded public facilities.\textsuperscript{25} Unfortunately, many of India’s poor disregard this low-quality treatment and underutilize available services.\textsuperscript{26} As a result, India’s poorest 20 percent suffer mortality and malnutrition rates at more than twice those of the wealthiest 20 percent.\textsuperscript{27}

India’s health system further suffers from large spending and quality discrepancies between states, and between urban and rural areas. States account for between 75 and 90 percent of public health spending, and such spending is substantially

\begin{footnotesize}
\begin{enumerate}
\item Ibid., pp. 89–92, and 96–113.
\item Ibid., pp. 233–35 (regarding low spending); Ministry of Health and Family Welfare, \textit{Bulletin on Rural Health Statistics in India 2006}, paras. 1.1–1.4 and Tables 31–33 (Mar. 2006) (regarding health infrastructure levels) (\textit{Rural Health Bulletin}).
\item Peters, p. 4.
\item Ibid., pp. 45–47 and 156.
\item Ibid., pp. 233–35.
\item Ibid., p. 5.
\item Ibid., pp. 4–6.
\item Ibid., pp. 4–7 and 28.
\item Ibid., pp. 40–43.
\item Ibid., pp. 2–3 and 218.
\end{enumerate}
\end{footnotesize}
lower in poor states. For example, Kerala, Punjab, and Tamil Nadu provide more than twice the per capita health spending of Bihar and Madhya Pradesh.28 State funding is also hampered by high salary costs and a failure to get funds to rural areas; these problems contribute to rural infant mortality rates that are 74 percent higher than urban rates.29

In short, India faces significant health challenges, and its health system is severely lacking, particularly for the poor. The need for high-quality Bank involvement in the health sector is understandable, and the Bank has increased its response to this need over the past few years.

World Bank Lending In The India Health Sector

For half a century, health constituted only a tiny fraction of the Bank’s work in India. The Bank’s first work in India was a 1949 railway project, and over the next 50 years, the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) financed 302 Indian projects worth a combined USD 33.7 billion.30 Only seven of these projects, however, worth USD 402 million, involved health.31 Instead, the overwhelming majority of the Bank’s projects targeted the infrastructure, transport, energy, and agriculture sectors; health represented just two percent of the Bank’s Indian projects, and only 1.1 percent of India’s loan commitments.32

Beginning in the 1990s, the Bank’s lending strategy for India dramatically changed. Between 1990 and 2000, the Bank approved 22 new health sector projects in India; more than three times as many health projects as in all the years before.33 The Bank’s dollar commitment to India of USD 6.8 billion in IBRD and

---

28 Ibid., pp. 3, 44, and 236.
29 Ibid., p. 44; Rural Health Bulletin, Tables 4–5.
30 World Bank projects database (Projects Data). References to Projects Data reflect the data in the projects database as of September 5, 2007.
31 These projects were: the First through Fifth Population Projects (P009677, 1972; P009766, 1980; P009821, 1983; P009852, 1985; and P009887, 1988); the Tamil Nadu Nutrition Project (P009765, 1980); and the National Family Welfare Training & Systems Development Project (P009910, 1989).
32 Projects Data.
33 Ibid. These projects are: the Seventh Population Project (P009940, 1990); the Second Tamil Nadu Nutrition Project (P009932, 1990); the Integrated Child Development Services Project (P010361, 1990); the Child Survival and Safe Motherhood Project (P010387, 1991); the National AIDS Control Project (P010393, 1992); the Family Welfare (Urban Slums) Project (P009963, 1992); the Second Integrated Child Development Services Project (P009977, 1993); the National Leprosy Elimination Project (P010424, 1993); the Cataract Blindness Control Project (P010455, 1994); the Family Welfare Project (Assam, Rajasthan, and Karnataka) (P010457, 1994); the Andhra Pradesh First Referral Health Systems Project (P010489, 1994); the Second State Health Systems Project
IDA loans and credits for those health projects was more than 16 times the total dollar amount of all previous health projects. Since 2001, the Bank has approved ten additional health projects and authorized supplemental financing for two more, totaling USD 1.5 billion in new IBRD/IDA loan and credit commitments. Overall, since 1990, health has constituted approximately five percent of India's new projects and 37 percent of its new Bank financial commitments. India is currently the Bank's largest Borrower with 75 active projects worth a total IBRD/IDA commitment of USD 15.2 billion.

It appears that the Bank's focus on Indian health needs will continue for the foreseeable future. The most recent Country Assistance Strategy (CAS) for India emphasizes increased health sector activity, primarily through the selective funding of high-impact pilot projects which provide models for action in multiple states. The CAS follows a sector-wide approach that includes projects to improve the private market for health, increase public health spending, reform state health systems, combat communicable diseases, and improve sanitation and clean water supplies.

**Corruption in India**

The functioning of the health system in India is largely a matter for its state governments. In a conscientious effort of capacity-building, many of the Bank’s new and pending projects in India will be implemented across the country on a state and district level in the neediest of India's states, i.e., those with the highest poverty

---

34 Ibid.
35 Ibid. The new projects are: the Second National Leprosy Elimination Project (P067543, 2001); the National Institution of Biologicals Project (P076635, 2002); the Food and Drugs Capacity Building Project (P075056, 2003); the Rajasthan Health Systems Development Project (P050655, 2004); the Integrated Disease Surveillance Project (P073651, 2004); the Tamil Nadu Health Systems Project (P075058, 2004); the Kerala Health Sector Support Project (P086734, 2005); the Second National Tuberculosis Control Project (P078539, 2006); the Second Reproductive and Child Health Project (P075060, 2006); the Karnataka Health Systems Project (P071160, 2006); and the third National HIV/AIDS Control Project (P078538, 2007). The Bank provided supplemental funding for the Reproductive and Child Health Project (P078676, 2002) and the Immunization Strengthening Project (P081991, 2003).
36 Projects Data.
38 Ibid., pp. 17, 25, and 38–44.
and/or weakest governance and capacity levels. This approach is consistent with the Bank’s understanding of the developmental needs of the Indian health system. But by relying on the least well-governed institutions for project implementation, the Bank will likely expose its projects to substantial fraud and corruption risks.

Recent studies suggest that corruption is a widespread problem in India and among Indian businesses: India ranks 70th in Transparency International’s index of corruption perceptions; Indian businesses are perceived to be the most likely to pay bribes when working abroad; and in the largest empirical study of corruption in India, 62 percent of survey respondents said that they personally had paid bribes to receive government services.41

This problem of corruption extends to India’s health sector. A study by Transparency International India found that government hospitals were the most corrupt basic government service, and that 27 percent of survey respondents—statistically representing about 30 million households—reported paying bribes at government hospitals in exchange for medicines, inpatient admission, and medical consultation and treatment.42 The Indian press has reported that counterfeit drugs also are a widespread problem, and that effective enforcement is lacking.43

To its credit, the Government of India has taken many steps to address corruption, paralleling the Bank’s enhanced anticorruption activity. It has passed laws prohibiting corruption and money laundering, has an active Central Vigilance Commission, and is a signatory to both the UN Convention Against Corruption and the Asian Development Bank–Organisation for Economic Co-Operation and Development (ADB-OCED) Anticorruption Initiative for the Asia-Pacific Region.44 Yet despite these efforts, the Bank’s projects are still exposed to corruption risks, as learned firsthand from its recent investigation of a major health sector project in India, as discussed below.

42  TI India Study, pp. 8–10 and 13–14.
Reproductive And Child Health Project Investigation

Between 2000 and 2005, INT received several allegations claiming that a cartel of pharmaceutical companies headed by Nestor Pharmaceuticals Ltd. (Nestor) and Pure Pharma Ltd. (Pure Pharma) were colluding to secure the award of most of the pharmaceutical contracts under the Reproductive and Child Health Project (RCH), a USD 277 million Bank-financed project. The contracts were being awarded on behalf of the Government of India by two government Procurement Support Agencies (PSAs)—Hospital Services Consultancy Corporation (India) Ltd. (HSCC) and Hindustan Latex Ltd. (HLL). The cartel allegations raised serious concerns at the time as HLL and HSCC were active PSAs throughout the Bank’s health sector portfolio in India.

In response, between November 2003 and July 2005, INT undertook four investigative missions to India, conducting more than 100 interviews with companies and individuals and reviewing thousands of pages of procurement-related documents provided mostly by the Government of India.

INT’s investigation found that RCH was plagued by systemic fraud and corruption:

1. Contractors had formed a cartel to defeat Bank procurement procedures and defraud the Government of India and the Bank. The investigation found that Nestor and Pure Pharma colluded with other companies and paid kickbacks to government officials to win 65 percent (approximately USD 50 million) of the total value of kitting and pharmaceutical contracts awarded. For these practices, the Bank debarred Nestor and Pure Pharma in July 2007.

---

45 Report of Investigation into Reproductive and Child Health Project, Credit N0180, India, p. 14 (Nov. 14, 2005) (RCH Report). RCH was approved on May 28, 1997, and closed on September 30, 2004. See Projects Data. It was followed by a USD 360 million successor project: Reproductive and Child Health II Project (RCH II), which was approved on August 22, 2006. Ibid.
46 Ibid., p. 57.
49 Ibid., pp. 4 and 21.
2. **PSAs had performed poorly and were corrupt.** The PSAs were found to lack adequate capacity, creating an environment susceptible to large-scale fraud and corruption.\textsuperscript{51} Furthermore, INT collected evidence that several officials from HLL and HSCC accepted kickbacks to secure the award of contracts, favorable inspection reports, and payment of contractors’ invoices.\textsuperscript{52} INT’s concern over PSA corruption increased further when, during the investigation, INT received further credible allegations of corruption against at least two other PSAs managing procurement under Bank-financed projects in India’s health sector.\textsuperscript{53}

3. **Ministry of Health and Family Welfare (MOHFW) officials were suspected of receiving kickbacks.** Several sources related first- and second-hand accounts of cash being delivered to MOHFW officials under RCH or other Bank projects, either directly to secure the award of contracts, or indirectly through PSA officials.\textsuperscript{54}

4. **Contractors under the project provided degraded pharmaceuticals and under-delivered medical supplies.** The investigation uncovered evidence of under-delivered quantities of medical supplies in several Bank projects.\textsuperscript{55} There was also evidence that degraded pharmaceuticals had been delivered in some instances, compromising project effectiveness and the health and lives of patients.\textsuperscript{56} Increasing the risk of extensive degraded product deliveries was the evidence of Nestor’s problems with quality production of some pharmaceuticals in general.\textsuperscript{57}

5. **Corrupt contractors and PSAs continued to be involved in ongoing Bank-financed projects.** Nestor, Pure Pharma and other contractors suspected of being involved in fraud, corruption, and collusion under RCH, were found to be active in other Bank projects.\textsuperscript{58} In addition, HSCC and HLL were the PSAs for a number of other health sector projects.\textsuperscript{59}

\textsuperscript{51} RCH Report, pp. 58 and 65.
\textsuperscript{52} Ibid., pp. 59–62 and 67–72.
\textsuperscript{53} Ibid., pp. 76–78.
\textsuperscript{54} Ibid., pp. 79–82.
\textsuperscript{55} Ibid., pp. 84 and 88.
\textsuperscript{56} Ibid., pp. 84 and 88–89.
\textsuperscript{57} Ibid., pp. 84–88.
\textsuperscript{58} Nestor, Pure Pharma, and HLL participated in the Malaria Control Project. Ibid., p. 92. Nestor, Pure Pharma, and HSCC participated in the Tuberculosis Control Project.
\textsuperscript{59} HSCC was the PSA for the Uttar Pradesh Health Systems Development Project, the Tuberculosis Control Project, the Immunization Strengthening Project, the Integrated Disease Surveillance Project, and the Food and Drugs Capacity Building Project. RCH Report, pp. 95 and 97. HLL was the PSA for the Malaria Control Project.
6. Problems plaguing RCH also appeared to be present across the Bank’s health sector portfolio in India. The investigation found that the collusive practices of Nestor and Pure Pharma affected other Bank projects. In the Child Survival and Safe Motherhood (CSSM) Project (the precursor to RCH) financed by an IDA Credit totaling USD 214.5 million, four companies (including Nestor and Pure Pharma) were found to have colluded and paid kickbacks to government officials to win 93 percent (USD 23.4 million) of the total value of pharmaceutical contracts awarded. From witnesses interviewed in the RCH investigation and complainants, INT obtained credible allegations of fraud and/or corruption involving both the PSAs and government officials in four other health sector projects.

7. RCH’s successor project was not designed to address specific risks of fraud and corruption. RCH’s successor project, the Second Reproductive Child Health (RCH II) Project was not designed to specifically address the risks of the structural deficiencies and systemic fraud and corruption revealed in the RCH investigation—in particular, weaknesses in both Bank and Government of India procurement, oversight, and supervision.

Resultant Actions

In anticipation of INT’s final report of investigation and drawing upon INT’s preliminary findings issued in March 2005, SAR and the Government of India developed a Governance Accountability and Action Plan (GAAP) for the health sector in India. The GAAP, which applies to “all centrally sponsored health and family welfare programs supported by the Bank and other pooling partners,” sets forth stakeholder responsibilities in “ensuring timely delivery of quality commodities at a competitive price.” This was followed by several critical actions after the issu-
ance of INT’s final report of findings which also identified elevated risks of fraud and corruption in other Bank-financed Indian health sector projects.

Bank President Wolfowitz ordered lending to India for new health sector projects to be temporarily suspended until risk mitigation measures could be strengthened. Thereafter, INT provided SAR with a risk assessment of two of the suspended projects. INT also participated in a dialogue with SAR and the Government of India to develop an agreed Action Plan of immediate and medium-term actions. One of the immediate actions was the agreement for the Bank to conduct a DIR on a selection of Bank-financed projects in India’s health sector.

HLL and HSCC, the PSAs under RCH, suspended two senior procurement officials, pending internal inquiries, and the Government of India referred a number of cases to the Indian Criminal Bureau of Investigation (CBI).

The Bank retained an international accounting and consulting firm to conduct an extensive review of the SAR procurement hub in collaboration with INT and the Bank’s Operations Policy and Country Services Procurement Unit. The review subsequently found, that the hub was not exercising its fiduciary function in a way that would allow the Bank to prevent fraudulent and corrupt activities during the procurement process.

Lastly, in May 2006, the Bank filed notices of debarment against Nestor and Pure Pharma, and debarred the two companies in July 2007 for collusive activities.

The suspension in lending was lifted in August 2006 following implementation of the necessary risk mitigation measures.

---

64 P. Wolfowitz letter to P. Chidambaram (Mar. 7, 2006) (on the temporary suspension of lending). The projects affected by this suspension were RCH II, the Second National Tuberculosis Control Project, and the Karnataka Health System Development and Reform Project. P. Chidambaram letter to P. Wolfowitz (Mar. 20, 2006) (on the agreement to other immediate and medium-term actions).
65 Ibid. Other immediate actions included: (1) sharing with the Bank the terms of reference relating to a procurement capacity building review; (2) retaining a qualified inspection agency to conduct a review of the quality and quantity of pharmaceuticals and medical goods supplied under Bank-financed health sector projects; and (3) installing an independent procurement agent for the procurement of ICB and NCB contracts in health projects. Ibid.
66 M. Prasad letter to S. Folsom (May 4, 2006).
67 PricewaterhouseCoopers, Review Of the South Asia Procurement Hub In New Delhi, pp. a–b and 4–8 (Nov. 22, 2006).
68 Decision of the Sanctions Board, Sanctions Case No. 71, In re Nestor Pharmaceuticals Ltd., para. 6 (July 9, 2007).
Overview of The India Detailed Implementation Review

Selection of Projects

As agreed to with the Government of India, the India DIR conducted an extensive detailed implementation review of five health sector projects:

1. Food and Drug Capacity Building Project (FDCBP);
2. Orissa Health Systems Development Project (OHSDP);
3. Second National AIDS Control Project (NACP II);
4. Malaria Control Project (MCP); and
5. Tuberculosis Control Project (TCP)

All five projects addressed some of India's most pressing and urgent health issues and needs, making their successful implementation extremely important. Their objectives and details, and the reasons why the Bank selected them for review, are as follows:

Food and Drug Capacity Building Project

The Food and Drug Capacity Building Project (FDCBP) sought to improve the quality and safety of the products of India's rapidly-growing food and drugs industries by building or renovating food and drug testing laboratories, providing adequate laboratory equipment, and training laboratory technicians to use the provided equipment. The FDCBP, currently in its fourth year, is financed by a USD 54 million IDA credit that became effective on October 17, 2003 and is scheduled to close on June 30, 2008. The Bank included the FDCBP in the DIR because: (1) the project was ongoing; and (2) it contained a large civil works component—an area that the Bank has found to be vulnerable to fraud and corruption in other projects.
Orissa Health Systems Development Project

The Orissa Health Systems Development Project (OHSDP) was a state-level project that sought to improve the health of the people of the eastern state of Orissa. At the time of the OHSDP’s 1998 launch, Orissa was considered one of the least-developed states in India: 44 percent of its population lived below the poverty line, and it had one of the highest infant mortality rates in the country.70 The OHSDP planned to address these issues by constructing or renovating many of the state’s healthcare facilities, supplying them with additional medical equipment, and improving the state’s health system policies.71 The project was financed by a USD 82.1 million IDA credit that became effective in September 8, 1998 and closed on March 31, 2006.72 The Bank included the OHSDP in the DIR because: (1) the Bank’s RCH investigation identified it as possibly tainted by fraud and corruption; (2) the DIR sought to include a state-level project in its scope to augment its other national projects; and (3) a successor project had been proposed within the Bank.

Second National AIDS Control Project

The Second National AIDS Control Project (NACP II), a successor to the Bank’s first National AIDS Control Project, aimed to reduce the spread of HIV infection in India and strengthen the country’s capacity to respond to HIV/AIDS. At the time of the NACP II’s 1999 launch, it was estimated that several million Indians were infected with HIV and the Bank was concerned that, without continued efforts to stem a growing infection rate, India could follow in the footsteps of some of the worst HIV/AIDS-affected countries in Africa. Under NACP II, the AIDS control strategy shifted from raising global awareness to changing behavior through targeted interventions—often conducted by non-governmental organizations (NGOs)—in which high-risk groups were identified and provided with counseling, condoms, and treatment for sexually transmitted infections. The project was financed by a USD 193.7 million IDA credit that became effective in September 11, 1999 and closed on March 31, 2006. The Bank included the NACP II in the DIR because: (1) the Bank’s RCH investigation identified it as at risk of exposure to fraud and corruption; (2) its design and scope were similar to a Kenya HIV/AIDS project that a past DIR found to exhibit indicators of fraud and corruption; (3) it followed a design model that the Bank was replicating in many countries;

70 Implementation Completion and Results Report on a Credit in the Amount of SDR 56.8 Million (USD 76.4 Million Equivalent) to India for the Orissa Health Systems Development Project, p. 7 (Sept. 26, 2006).
71 Project Appraisal Document on a Proposed Interim Trust Fund Credit in the Amount of SDR 56.8 Million to India for an Orissa Health Systems Development Project, pp. 113–4 (May 4, 1998).
72 Projects Data.
and (4) it had a successor project (the Third National AIDS Control Project) in the Bank’s project pipeline.

**Malaria Control Project**

The Malaria Control Project (MCP) sought to assist India’s National Malaria Eradication Program by introducing a more strategic and effective set of mechanisms to control malaria. Malaria causes substantial death, morbidity, and related social and economic losses in India, especially among the rural poor.\(^{73}\) The MCP’s malaria control efforts included providing malaria prevention mechanisms, such as insecticide-treated bed nets and larvivorous fish, and introducing early detection and treatment strategies.\(^{74}\) The MCP was financed by a USD 114 million IDA credit that became effective on October 27, 1997 and closed on December 31, 2005.\(^{75}\) The Bank included the MCP in the DIR because: (1) the Bank’s RCH investigation identified it as possibly tainted by fraud and corruption; and (2) it had a successor project (the Vector Borne Disease Control Project) in the Bank’s project pipeline.

**Tuberculosis Control Project**

The Tuberculosis Control Project (TCP) sought to support India’s National Tuberculosis Control Program. At the time of the TCP’s 1997 launch, it was estimated that half of India’s population was infected with tuberculosis,\(^{76}\) and the Government of India had just successfully piloted its Directly Observed Treatment – Short Course (DOTS) approach in which the patient is accurately diagnosed using high-quality sputum microscopy, assigned a pre-packaged medical treatment pack, and administered directly-observed treatment for six to eight months with strict follow up, supervision, and monitoring. The Bank expected DOTS to greatly reduce TB-caused mortality and disability. The TCP was financed by a USD 124.8 million IDA credit that became effective on May 8, 1997 and closed on March 31, 2006. The Bank included the TCP in the DIR because: (1) the Bank’s RCH investigation identified it as possibly tainted by fraud and corruption; and (2) it had a successor project (the Second National Tuberculosis Control Project) in the Bank’s project pipeline.

\(^{73}\) MCP PAD, p. 2, para. 1.
\(^{74}\) MCP ICR, p. 3.
\(^{75}\) Projects Data.
\(^{76}\) SAR, para. 2.1, p. 3.
Funding and Type of Procurement

All five projects reviewed for the India DIR were funded by IDA credits. Although some of the projects were part of larger government initiatives that involved funding from bi-lateral and other donors, all five of the DIR projects were exclusively funded by the Bank in conjunction with some partial funding by the Government of India.

Funding of the individual projects was facilitated by use of the Bank’s special account mechanism, which provides for an initial advance to the Government of India followed by subsequent replenishments. For the four nationally-sponsored projects, the funds would flow from the Bank’s Special Account established with the Ministry of Finance (MOF) to the MOHFW, and then either to the PSAs for national-based procurement or the states and districts for state-wide and local procurement needs. The amount of funds disbursed was contingent upon statement of expenditure (SOE) tallies presented by the districts to the states, and the states to the MOHFW project implementation units for reimbursement.

The five projects procured goods, works and services utilizing a variety of the Bank’s procurement methods, including international competitive bidding (ICB), national competitive bidding (NCB), shopping, direct contracting and single source selection. The type, size, and number of contracts procured under each project varied with the general and specific characteristics of the projects’ scope and needs.

DIR Scope

A. Expansion of Scope From Previous DIRs

The size and effort of the India DIR was unprecedented. Two key factors made the India DIR unique and far more complex in scope and effort than other DIRs and correspondingly required increased staffing, resources, and completion time. First, the India DIR was simply larger in scale and scope than other DIRs. It involved the review of a greater number of contracts and visits to far more field sites across a more expansive and challenging geographical territory than other DIRs. Second, the India DIR’s methodology was expanded to be more holistic in its approach. In contrast to other DIRs, the India DIR incorporated more forensic expertise and techniques, adopted more rigorous validation and quality assurance procedures, and substantially increased the amount of analytical tests and procedures. These
steps were taken not only to respond to the Bank’s GAC Strategy and uncover further links, patterns, schemes, and inconsistencies that point to harmful fraud and corruption, but also to increase the value of the DIR’s findings.

B. Procurements by Procurement Support Agencies

Four of the five projects selected—FDCBP, NACP II, MCP, and TCP—were Centrally Sponsored Schemes (CSS) of the MOHFW that were implemented through State Societies. Each of these projects utilized the services of a Procurement Support Agency (PSA) to manage the procurement of the project’s larger contracts—e.g., ICBs and NCBs—which were subject to the Bank’s prior review threshold. The fifth project—OHSDP—was state sponsored.

The World Bank and the Government of India agreed that the India DIR’s examination of procurement would encompass: (1) reviewing 100 percent of available ICB and NCB contracts procured by the PSAs relating to the five projects; (2) collecting data regarding 100 percent of available decentrally-procured contracts in the three projects that utilized this method of procurement; and (3) reviewing a selection of those decentrally-procured contracts.

C. Procurements By State and District Societies

Although national-based with centralized procurement capabilities, a great deal of the implementation activities for the CSS projects—such as administering medicines or distributing condoms—occurred at the state and district level, causing considerable project funds to be allocated to the State and District Societies for the procurement of goods and services in support of these activities. Comprising a project’s smaller dollar-value contracts, most were procured through national and local shopping and fell well below the prior-review thresholds. Although small individually in monetary terms, in aggregate the total of the funds procured at this level for three of the four projects was significant relative to total project funds spent.

The sheer volume of these contracts—estimated at more than 200,000 nationwide—and their expansive geographical dispersion prevented a full-scale review of the totality. Instead, the DIR limited its review of these types of contracts to the contracts procured within three of the five states selected by the DIR for its review of implementation activities. The three states were Karnataka, Maharashtra, and Orissa.78

77 Centrally Sponsored Schemes (CSS) are specific purpose transfers from the Government of India to the states for the purpose of influencing expenditure in areas which are the states’ constitutional responsibility. Such schemes are formulated and, to a large extent, financed by the Government of India while the responsibility for implementation primarily rests with the states.

78 The NACP II project team reviewed an additional 14 locally procured contracts in Chhattisgarh.
D. Review of Implementation

Implementation within the CSS projects covered a wide swath of India’s population with some projects addressing health needs in every Indian state and union territory. Because visits to all states and districts were not feasible, the DIR systematically selected five states in which to conduct its review of the projects’ implementation activities: Chhattisgarh, Karnataka, Maharashtra, Orissa, and Uttar Pradesh (DIR States). The DIR States were the more active in terms of procurement and implementation activities for the four CSS projects and shared the most overlap across the projects, with suitable geographical representation.

As part of its review, the DIR also visited offices, implementation sites, warehouses, distribution units, hospitals, clinics, laboratories, and civil works sites at the district level within the DIR States. The districts selected for visits were chosen based on a variety of criteria including type of volume of goods and services distributed, population of project-affected persons, indicators identified during the procurement review, number and types of complaints received, transportation logistics, and physical safety of the team.

E. State-Based Project

To review implementation, the DIR visited 55 OHSDP-funded hospitals in 23 districts, spanning work supervised by all five construction management consultants (CMCs), which represented 35 percent of all project sites. To examine procurement—which was conducted at the state level by the state’s Project Management Cell and PSAs—the DIR performed a review of all of the 502 OHSDP contracts, worth USD 46.7 million, for which the DIR obtained contract documents. 79 The DIR also performed detailed reviews of bid documents, bid evaluation reports, and contracts for all design, architect, and construction management consultant procurements; a selection of 52 civil works contracts (33.5 percent of all civil works contracts) that included all five CMCs; and a selection of 33 equipment contracts for a variety of equipment types that previously had been identified as problematic. The DIR did not review any local contracts related to the OHSDP.

Preliminary Phase

In September and October 2006, DIR representatives undertook a four-week mission to India and met with the Secretary for Health and Family Welfare, the

79 These included 155 civil works contracts worth USD 30.9 million; 183 equipment, instruments, and furnishings (EIF) contracts worth USD 12.1 million; and 147 drugs contracts worth USD 3.6 million. The U.S. Dollar value is calculated using the market exchange rate on the contract date.
Joint Secretary for MOHFW, and representatives of the public health departments and state societies of each of the DIR States, and with representatives from each project’s PSA. The meetings were facilitated by a nodal officer from the MOHFW appointed by the Joint Secretary, MOHFW, who also traveled with the DIR staff to the five states. All the meetings were well-attended and proved essential in establishing good working relationships with the officials concerned. Most of the meetings began with presentations by senior project managers on their project’s activities and statistics.

Review Phases

The India DIR was significant in scope and duration. Spanning a period of 14 months from September 2006 to October 2007 and involving the services of more than 75 professionals, supporting consultants, and staff, its analytical work began in October 2006 with the request and collection of the contract and procurement-related documents. Much of the balance of 2006 was spent inputting data and information from the contract documents into the DIR's database (DIRDB) and preparing the data for analysis. The review teams were deployed on a staggered basis beginning in January 2007 to initiate the detailed procurement review and conduct preliminary data analytics. Site visits for the review of project implementation began in March and were completed by mid-May. The concluding months of the DIR were spent in Washington, DC, finalizing working files, documenting findings and analyses, and drafting the DIR Report.

A. Document Request

The PSAs were requested to provide procurement-related documents for each contract they had tendered, including: bidding documents, executed contracts, bid evaluation reports and copies of the winning and losing bids. For the contracts

---

80 Maharashtra (Mumbai)–Public Health Dept; Director of Health Services; State AIDS Control Society (SACS); State TB Officer; Malaria State Aids Control Society (MSACS); State Malaria Control Society (SMCS); Malaria District Aids Control Society (MDACS); State Program Officer (Malaria); Karnatak (Bangalore)–Health & Family Welfare Dept; State Aids Prevention Society; State Tuberculosis Centre; Chhattisgarh (Raipur)–Health & Family Welfare; Malaria State Control HQ; Director of Health Services; State Training Center: Uttar Pradesh (Lucknow)–Medical Health Dept; SACS; TCP; MECON; Orissa (Bhubaneswar)–Project Management Cell of OHS-DP; ELMARC; Orissa Construction Corporation Limited (OCCL); IDCO; KKAAL; State Malaria Control Project Office; National Vector Borne Disease Control Project; State Aids Control Society: PSAs: NTPC–National Thermal Power Corporation (HIV); HSCC–Hospital Services Consultancy Corporation (FDCBP and TCP); RITES (Malaria); HII–Hindustan Latex Ltd (HIV): OHSDP Orissa: ELMARC; Orissa Construction Corporation Limited (OCCL); Industrial Infrastructure Development Corporation (IDCO); KK Agrawal (KKAAL); MECON; SCAG, SDMU.

81 Mr. Arun Baroka, Director, MOHFW.

82 The India DIR TOR initially called for the supporting procurement file documentation for all contracts procured under a project, including the contracts procured by the state societies and districts using shopping or direct source methods. Because of the large volume of contracts procured by the states and districts—estimated
procured by the state and district societies from the five DIR States, the PSAs were requested to provide a full list of contract awards in an electronic format with related detailed information. Related supporting documentation on selected samples of these contracts would be gathered and reviewed during the DIR’s site visits.

The primary purpose of the September 2006 mission was to ensure that all of the projects would be able to complete (1) lists of all contracts that had been awarded, and (2) the collection of the supporting documentation for all ICB and the larger NCB and contracts, within the agreed time frame and in a format acceptable to the DIR.

The visits to the various state, district, and local offices involved in each of the projects confirmed that the supporting documentation for each of the contracts was available, albeit storage of the documentation varied enormously. While the DIR was promised that the documents would be properly collated, documented, and forwarded to its facility in Delhi, complications arose. For example, the DIR representatives were informed that documentation seen at the PIU in Bhubaneswar (shown in the photos below) would take seven days to collate, which appeared an unlikely task as the documents related to more than one project.

Photograph 1: Document Storage, HQ, Bhubaneswar, Orissa, September 27, 2006

at more than 25,000—the TOR was subsequently amended to call for the document packages of only the contracts procured by the PSAs and PIUs.
Furthermore, the DIR representatives requested information concerning the storage of drugs at establishments where drugs would either have been held centrally and/or delivered for further distribution to other centers. The DIR representatives were shown a number of storage areas, and examples of the best and worst case scenarios are shown below.

**B. The DIR Facility**

The WBOD provided the DIR with dedicated, refurbished office space in Delhi within which to conduct its various reviews and analyses, store documents and undertake data input. The Country Office also provided the DIR one full-time administrative staff and driver. The DIR equipped the facility with 14 computer workstations, along with printers, a fax machine, and a photocopier. The facility had extensive storage capabilities and a 24-hour on-site security presence. Throughout the time that the DIR was present in Delhi, the WBOD provided excellent support and responded to all requirements.
C. Document Collection, Scanning, and Printing

Overall, the collection of documents from the PSAs and OHSDP PIU was an extensive and problematic undertaking fraught with delays. Originally, the DIR intended to retain the procurement-related documents through the duration of the DIR, and return them to the PSAs at its conclusion. However, the PSAs’ insistence that the documents be returned immediately after the data input phase required the documents to be scanned prior to returning them. While this allowed the DIR to retain a complete set of documents, it was a mammoth undertaking as the PSAs insisted that the documents be returned in the same state as received, meaning many of the bound documents, including books, had to be broken apart, scanned, and then re-bound. As a result some of the DIR support staff were diverted away
from data entry to undertake the tasks of scanning, printing, and rebinding, which had the inevitable result of slowing down the data entry phase.

This delay was further exacerbated by the difficulties encountered with the officials of OHSDP. After OHSDP officials agreed in September 2006 to deliver the requested documentation to the facility in Delhi, in mid-October they refused to do so, citing concerns about the records’ security and the need to have the documents available for an upcoming audit. Several weeks of negotiations at Joint Secretary level failed to resolve the issue, and in late November 2006 the DIR was compelled to send a team of people along with scanners and workstations to Orissa to scan more than 300,000 documents over a three-week period. Many of the OHSDP papers were in very poor condition, with pages and/or entire documents missing.

D. Contract and Procurement Data Input

Up to 50 fields of relevant key pieces of information from the approximate 885 procurement files provided by the PSAs—such as supplier names, contract values, procurement method, and bid evaluation results—were input into the DIR’s computerized database (DIRDB), which was completed by February 2007. Data pertaining to 835 ICB and NCB contracts representing 1152 companies and 1836 individuals were entered. PIUs within the DIR States provided up to 13 data fields of information on more than 14,000 contracts, which were imported electronically directly into the DIRDB. To ensure the integrity of the data inputting and importation, the DIRDB underwent extensive quality assurance and data standardization.

Various detailed and summary lists of relevant data and information from the contract files were printed and provided to the DIR teams to assist in the procurement review.

E. Data Analytics

The DIR has developed a standard battery of computer data analyses that it executes on the contract data entered into the DIRDB. Currently numbering 75, the quantity and robustness of the analytical procedures increases with each DIR, as new analytics are developed and the number of data fields collected is expanded.

An initial iteration of analytics by forensic computer and accounting specialists is performed on the population of data within the DIRDB in order to identify contracts with preliminary indicators of fraud and corruption, such as common links between bidders or indications of bid winner rotation. Typically, the results

---

83 Includes a total of 50 National Shopping, Direct Contracting, Local Shopping, and QCBS contracts.
are used in determining which contracts—selected as a purposeful sample from the entire population—are to be considered for a manual in-depth review. For the India DIR, however, this step was negated by the decision to target an in-depth review on all ICB and NCB contracts procured by the PSAs under the national projects and a large number of contracts procured by the OHSDP PIU. Indicators identified from the initial round of data analysis and other useful information and results were provided to the DIR teams for their procurement review. Additional data analytics were devised and conducted as needed throughout the DIR based on the ongoing findings of the DIR teams and the indicators’ interrelationship with other data.

F. **DIR Project Review Teams**

Each DIR project was staffed with a dedicated team of two to five investigators, analysts, and subject matter experts. The teams were supported by a core team of senior managers who led the DIR project and oversaw and ensured the delivery of planning, logistical and administrative support to the teams. The teams were also supported by experienced forensic data analysts and forensic accountants and received IT support and services from both INT and WBOD.

G. **Review of Procurement and Contracting**

In January 2007, the DIR project teams began the review of all 835 ICB and NCB contracts for indicators of fraud and corruption, as well as collusive activity in contract procurement. This review consisted of analysis of contract and procurement packages and the events and activities of the bidding and award stages. The individual project reviews generally lasted three to four weeks and examined, as was available, awarded contracts, bid evaluation reports (BERs), winning and losing bids, and correspondence between the Bid Evaluation Committee (BEC) and the bidders, as well as related documentation. The DIR also collected data regarding approximately 14,000 decentrally-procured contracts and analyzed selections of these contracts—chosen by project, district, and value—for indicators of fraud and corruption. The teams documented their findings in working case memos (WCM) and, where appropriate, updated the DIRDB with new information. The findings played a key role in determining what sites and districts to visit during the implementation review.

H. **Review of Financial Management and Audit Reports**

The DIR utilized financial management (FM) specialists and forensic accountants to examine documentation and FM processes within the PSAs and OHSDP
PIU to identify weaknesses in the control environment as well as discrepancies between formally codified procedures and daily execution. The DIR examined specific transactions related to the contracts exhibiting certain indicators from either the procurement or financial management reviews; interviewed management of the implementing organizations; and reviewed financial reports, audit reports, and project financial management reports.

I. Review of Implementation and Supply Chains

The DIR undertook site visits related to all five projects to physically verify the status and/or results of implementation, particularly in relation to civil works contracts, and review implementation-related documentation. In the process, the teams inspected dozens of sites and hundreds of pieces of equipment, examined stocks of pharmaceuticals and other project goods, and took thousands of photographs and several hours of video. These reviews ranged in duration from three to six weeks depending upon the project, and required a huge logistical effort by support staff at the DIR facility as well as the travel desks both in Washington, DC, and WBOD. For general safety concerns and due to ongoing Naxalite rebel activity in certain areas, the DIR project team visiting remote sites in Orissa retained a security detail. The last team left India in mid-May 2007.
FOOD AND DRUGS CAPACITY BUILDING PROJECT

Overview

Project Objective

As India’s food and drug industry expands and ever larger numbers of India’s poor begin to consume its products, concerns have arisen regarding the safety and quality of food and drugs in the country. The Food and Drugs Capacity Building Project (FDCBP) is a nationwide project that aims to improve the quality and safety of food and drugs in India by strengthening the regulatory framework and incorporating components of consumer education and public-private partnerships.¹

The need for the FDCBP is timely, given that the food and drug industry in India is large and growing. The pharmaceuticals industry ranks as the world’s third largest in terms of volume and is expanding at over 10 percent annually.² While the Government of India has succeeded in realizing its policy objectives of ensuring the availability of reasonably priced drugs and promoting the growth of a vibrant domestic industry, the objective of ensuring uniform quality still needs to be effectively addressed. The capacity of states’ drug testing facilities have differed—of the 19 drug testing laboratories functioning in 35 states and union territories before the FDCBP began, only seven had the ability to perform a full range of tests.³ Insufficient consumer awareness and weak enforcement of existing regulations also contribute to the negative public health effects of poor drugs.⁴

² PAD, Annex 2, p. 29.
³ Ibid.
⁴ Ibid.
With respect to food quality, there is increasing concern in India about unsafe foods and their effect on the health of the population. Though a majority of the Indian population continues to depend on the small and informal sectors, such as food street vendors, the growth of urbanization has meant that increasing numbers of Indians are consuming processed food products, both domestic and imported.\(^5\) While there are regulations for ensuring food safety in India, enforcement is weak and methods outdated.\(^6\) The World Health Organization estimates that in low-income countries about three-fourths of all episodes of diarrhea are caused by unsafe water and poor sanitation, with the remaining one-fourth attributable mostly to food-borne infections.\(^7\) Food-testing laboratories in India have traditionally not had sufficient capacity to perform analysis to respond to current needs or to meet future growth. For example, the majority of state laboratories have been able to perform only basic analysis and have not been able to perform comprehensive testing, including analyzing samples for microbiological contaminants.\(^8\) The FDCBP aims to address these public health problems.

Not only does consumer protection from unsafe and poor-quality foods and drugs serve public health interests generally, but improved regulation and safety also increase confidence in Indian products, making them more competitive internationally, thereby supporting exports in global markets.\(^9\)

The FDCBP is an ongoing five-year project that began in October 2003 and is scheduled to conclude on June 30, 2008. In funding the project, the Bank plans to disburse a total of USD 54.03 million.\(^10\)

**Summary of Findings**

The DIR’s review of the FDCBP found:

1. indicators of corrupt and fraudulent practices in the procurement and implementation of equipment and civil works, such as inconsistent treatment of bidders, submission of fraudulent documentation, and inappropriate rejection of bidders;

---

\(^6\) *Ibid.*  
\(^7\) *Ibid.*, p. 3.  
\(^8\) *Ibid.*  
2. widespread deficiencies in the implementation of equipment and civil works, such as payment for incomplete civil works and uninstalled equipment; and

3. weaknesses in the Bank’s identification and handling of these indicators and deficiencies.

The DIR examined FDCBP laboratory and office equipment contracts procured by the procurement support agency (PSA) through international competitive bidding (ICB) and national competitive bidding (NCB) procedures. The DIR found questionable procurement practices, some of which indicate fraud and corruption, in contracts representing 87 percent of the number of pieces and 88 percent of the total value of equipment procured. However, the DIR noted that none of its findings suggest the existence of cartels or collusive behavior between bidders.

The DIR found inconsistencies in the administration of the procurement process in the selection of suppliers, such as in determining whether a specific item met specifications or in choosing to seek clarifications from some substantially responsive bidders and not others. The DIR also found indicators related to government interference with the procurement process such as unreasonable delays in the award of contracts, shifting bidding deadlines and requirements, and narrowly drafted tenders. Procurement officials appeared to have employed favoritism when awarding contracts to bidders that failed to meet performance criteria while disqualifying other bidders that apparently met, or could have met, the criteria. In addition, the DIR found potentially fraudulent documents submitted by winning bidders, such as forged performance certificates, that, in some cases, were corroborated by complaints by other bidders.

Under the FDCBP, the DIR observed an unusual method in which bids were evaluated and recommended for contracts. Typically, contract awards are based on the bid evaluation report (BER) and recommendations of the Bid Evaluation Committee (BEC) under the auspices of the project’s PSA. Yet, for at least three tenders of equipment, the Ministry of Health and Family Welfare (MOHFW) installed a special steering committee composed of MOHFW officials, officials from the PSA, and technical experts to review bid submissions and recommend bid awards. The DIR found that the steering committee’s evaluation of bids frequently differed from that of the BEC and exhibited indicators of non-transparency, preferential treatment, and other corrupt and inconsistent practices. Further, the MOHFW always followed the committee’s recommendations, repeatedly overruling the BEC.
The DIR found indicators of fraudulent and corrupt practices in a third of the civil works procurements that it reviewed. For example, the DIR noted the PSA’s unsupported disqualification of a qualified lower cost bidder, as well as the awarding of contracts to companies that submitted false or non-compliant bidding documentation.

Most of the contracts exhibiting indicators of fraudulent and corrupt practices in the DIR’s procurement review also had implementation deficiencies. The DIR found widespread deficiencies in the delivery, installation, use, training, or maintenance of equipment at all 15 of the food and drug laboratories and MOHFW regional offices that it visited. For example, more than half of the 282 pieces of equipment procured for the visited laboratories were undelivered or uninstalled. The DIR also found improperly installed equipment, damaged equipment, and the delivery of unneeded and unused equipment. In addition, the DIR found many instances in which suppliers did not provide the required training and demonstrations or meet warranty commitments to repair broken or damaged equipment.

The DIR found that substantial payment had been issued for almost half of the contracts where equipment was undelivered, delivered in a damaged state, or delivered with missing parts.

Moreover, the DIR found widespread deficiencies in all nine civil works sites visited. Deficiencies included significant electrical, water supply, and infrastructure problems and issues related to water damage, concrete, general construction, poor quality of materials, and general maintenance. Many sites would require additional work to conform with tender requirements. Nonetheless, despite these implementation deficiencies, in some cases the PSA provided contractors with completion certificates that allowed full payment for unfinished or deficient work.

The DIR found that the FDCBP’s reports and assessments produced to date do not adequately convey the high rate of procurement and implementation problems and deficiencies afflicting the project. The DIR found that the Bank’s handling of such issues thus far has significant shortcomings. To its credit, the Bank identified problems in the administration of the procurement processes in some cases. However, the Bank still gave its no-objection to the award of these contracts, even though the problems appear not to have been remedied. Furthermore, the Bank apparently has conducted only one procurement post-review in the four years that the project has been effective. While noting some deficiencies in the implementation of civil works—though not to the extent observed by the DIR—the Bank nonetheless upgraded the project’s implementation performance rating from unsatisfactory to moderately satisfactory in its last two *aides-mémoire*. When Bank officials did identify indicators
of fraud and corruption, such as inconsistent administration of procurements that favored certain bidders, or patterns of unreasonable procurement delays, they did not pursue the issue with sufficient rigor, resulting in the matter remaining unresolved.

---

**Project Background**

**Components**

The FDCBP consists of three components. The first component, policy development, program coordination, and monitoring, was budgeted at USD 7 million.\(^1\) This component includes studies and policy reviews to underpin the formulation of policy and institutional reforms by developing options for reform in such areas as food and drug administration, information collection for health problems associated with food and drug quality and use, and financing of food and drug agencies.\(^2\) This component also includes the establishment and operation of a central program coordination unit (PCU) at the Ministry of Health and Family Welfare (MOHFW), the improvement of central physical facilities for food and drug oversight, a monitoring program that conducts household surveys to assess public perceptions and knowledge about the quality and safety of foods and drugs, and the organization of independent audits of public and private laboratories.\(^3\)

The second component of the FDCBP, the food quality and safety component, was allocated the most funding—USD 44.35 million.\(^4\) The focus of activities under this component is to strengthen the government’s oversight and regulatory capacity for food safety at the central and state levels, to educate consumers on matters related to food safety, and to upgrade related skills in the private sector.\(^5\) The component aims to build awareness among consumers, manufacturers, retailers, and street food vendors of issues concerning food safety and to train 2,000 inspectors and 500 analysts in public sector laboratories, 1,000 staff from the private sector, and 20 umbrella consumer organizations in food quality and safety issues.\(^6\) The component also

---

\(^1\) PAD, Annex 2, p. 29 (Apr. 28, 2003).
\(^2\) Ibid., p. 30.
\(^3\) Ibid.
\(^4\) Ibid., p. 31.
\(^5\) Ibid.
\(^6\) Ibid.
seeks to develop and disseminate Hazard Analysis Critical Control Point standards, an internationally accepted scientific method of quality assurance.17

In order to address infrastructure gaps that hamper timely and comprehensive testing of food samples, the food quality and safety component also focuses on the construction and equipping of 10 central government laboratories; the renovation, upgrading, and equipping of 11 central government laboratories and public health offices; the construction and equipping of nine state laboratories; and the renovation and upgrading of six state laboratories.18 Specifically, the project finances civil works, furniture, equipment, laboratory supplies, and incremental operating and maintenance costs in these locations, with the aim of ensuring that laboratories adopt minimum quality standards in testing.19

The third component of the FDCBP, the drug quality and safety component, is funded with USD 21.65 million.20 The focus of activities in this component is to strengthen the government’s oversight and regulatory capacity for drug safety at the central and state levels, to educate consumers on matters related to drug safety, and to upgrade related skills in the private sector.21 This component aims to build awareness among consumers, small manufacturers, and retailers in issues concerning drug safety, with the objective of encouraging consumers to adopt quality and safety as criteria in making choices on drugs and retail outlets.22 The component also seeks to update pharmaceutical standards and to train about 625 regulatory staff and 2,000 industry personnel in “good manufacturing practices and good laboratory practices.”23

Under national drug policy, the central government laboratories function as appellate authorities and have the responsibility to test imported drugs and blood products.24 Thus, the FDCBP has included in the third component the construction and equipping of one central government laboratory and the renovation and equipping of one existing central government laboratory to reduce backlog and enhance the range of tests.25 At the state level the testing of drug samples has been limited because of the absence of sophisticated instruments, lack of trained analysts, short-

---

17 Ibid.
18 Ibid., p. 32.
19 Ibid.
20 Ibid.
21 Ibid.
22 Ibid.
23 Ibid., pp. 32–33.
24 Ibid., p. 33.
25 Ibid.
age of funds to procure reagents for the new instruments, lack of adequate instruments, and understaffing. To address these constraints and to increase sample testing threefold (from about 36,000 to 100,000) over the project period, this component plans to finance civil works, furniture, equipment, laboratory supplies, and incremental operating and maintenance costs to construct and equip five new state drug testing laboratories and renovate and equip 12 existing state laboratories.26

**Implementation Structure**

### A. Procurement Arrangements

The MOHFW is responsible for procurement arrangements under the FDCBP, in accordance with Bank procurement guidelines and procedures.27 Most of the procurements are overseen at the central government level by a PSA.28 The MOHFW selected Hospital Services Consultancy Corporation India Limited (HSCC) on a single source basis as the PSA to procure all civil works, goods, equipment, and furniture.29 Small value items are procured at the state levels by the various laboratories.30

At the time of the India DIR, HSCC had conducted 18 tenders and awarded 77 contracts to supply equipment to laboratories under the FDCBP.31 The equipment has been procured for 65 food laboratories and 24 drug laboratories located nationwide with food and drug testing capabilities.32 The project has also conducted 10 tenders and awarded 33 contracts for civil works.33

A PCU is responsible for procuring services for various activities under the FDCBP. These procurements serve to staff the central and state laboratories; training and workshops; information, education, and communication projects; the management information system; and other consultancy services.34

---

26 Ibid.
27 Ibid., p. 39.
28 Ibid.
29 Ibid.
30 Ibid.
31 HSCC provided the FDCBP Equipment Consignees List to the DIR on February 14, 2007. The DIR notes that the PAD states that a total of 185 contracts are to be awarded for the procurement of equipment for laboratories under the FDCBP. PAD, Annex 6(A), p. 39.
33 The PAD states that 51 civil works projects in total are planned under the FDCBP.
B. Financial Management and Disbursement Arrangements

The FDCBP has a financial management system that is designed to account for and report the project’s resources and expenditures.35 The PCU, where over 75 percent of the project expenditures are incurred, is staffed with personnel who have been exposed to Bank-financed projects in the health and family welfare divisions.36 A financial management system has been developed for the project, and a finance manual, focusing on financial reporting and monitoring, has been prepared.37

For the procurements made by HSCC, the MOHFW advances funds directly to HSCC.38 HSCC certifies the invoices and bills after payment and forwards them to the finance and accounting section of the PCU for settlement/liquidation of the advance.39 The annual budget is based on the annual work program at the central PCU and the requirements of the participating states with respect to their specific annual work plans.40

Project Reports and Assessments

Equipment contracts valued at more than USD 300,000 and civil works contracts valued at more than USD 500,000 are subject to the Bank’s prior-review prior to contract award.41 The Bank also conducts periodic post-procurement reviews of contract awards under the prior-review threshold to validate adherence to the Bank’s procurement guidelines.42

The project incorporates formal supervision missions to review project implementation.43 Mission teams include task team leaders with experience in public health program operations in developing countries, financial management specialists who review the project’s adherence to fiduciary requirements, procurement specialists, and technical experts such as biomedical engineers and architects.44 Three missions were planned for the project’s first year, and two were planned for

---

35 Ibid., Annex 6(B), p. 52
36 Ibid.
37 Ibid.
38 Ibid., p. 53.
39 Ibid.
40 Ibid.
41 Ibid., Annex 6(A), Table B, pp. 48–49.
42 Ibid., p. 44.
43 Ibid., Additional Annex 12, p. 69.
44 Ibid.
every year after that, with a midterm review conducted in 2005. To date, the Bank has conducted six such missions.

**Costs and Time**

The FDCBP became effective on October 17, 2003, and is financed with a USD 54 million International Development Association credit. The project is currently in its fourth year, and the planned closing date is June 30, 2008.

---

**The DIR’s Approach to the FDCBP**

The FDCBP was selected for the India DIR for two primary reasons. The FDCBP is an ongoing project, unlike the other projects selected for the DIR. Second, the FDCBP involves both equipment and civil works components, which allows the DIR to diversify the types of projects under its review.

The DIR's review of the FDCBP examined the MOHFW's procurement and implementation of laboratory and office equipment; the MOHFW's procurement and implementation of civil works, such as construction, renovation, and expansion of food and drug laboratories; and the project’s formal reports and assessments. Focusing on the project's high-risk areas, the DIR maximized its ability to identify indicators of corrupt schemes and fraudulent practices that could significantly affect the FDCBP’s outcomes.

**Procurement of Equipment Contracts**

The DIR reviewed the procurement of laboratory and office equipment under the FDCBP for indicators of corrupt and fraudulent practices. The DIR reviewed documentation requested from and provided by HSCC, as well as relevant documentation obtained from the Bank’s Integrated Records and Information Service.
India DIR (FDCBP)

(IRIS) database. The DIR analyzed specific equipment contracts in each tender to identify indicators of fraud and corruption in particular instances and also analyzed documentation across tenders to detect wider patterns of indicators.

The DIR requested from HSCC documentation for the procurement processes of all equipment under the project. HSCC provided documentation for 16 equipment tenders, representing 64 equipment contracts. During the DIR’s onsite visits to laboratories and offices, and after reviewing the project’s equipment consignees list, the DIR learned that the MOHFW had conducted two additional tenders for the procurement of equipment under the FDCBP, involving the award of 13 additional equipment contracts. HSCC did not provide the DIR with any procurement documentation for these additional 13 contracts.

Procurement documentation reviewed by the DIR included invitations to bid (ITBs), bid evaluation reports (BERs), bids, contract award agreements, and correspondence from the Bank, the MOHFW, and HSCC officials.

HSCC did not provide the DIR with a complete set of documents, limiting the DIR’s review. For example, HSCC did not provide several ITBs, a fundamental document in the procurement process. HSCC also did not provide several bids. In some cases, pages were missing from the BERs. Consequently, in cases where the ITB was missing, the DIR had difficulty verifying the accuracy of BER assertions regarding the responsiveness of certain bidders. In other cases, the DIR detected indicators of fraud and corruption in the procurement of specific equipment but was unable to confirm whether the contract was awarded due to missing documentation. The DIR notes that a lack of complete information not only disregards the letter and spirit of the IDA credit agreement, but prevents effective project auditing and raises concerns regarding the accuracy and transparency of the bid evaluation process.

Nonetheless, despite problems with missing documentation, the DIR was able to conduct a thorough review of the documents received relating to equipment tenders administered under the FDCBP. The DIR selected for review 38 of the 64 equipment contracts awarded. The selection of contracts was based on equipment value, with the higher valued contracts chosen over ones with negligible values.

---

49 HSCC provided the FDCBP Equipment Consignees List to the DIR on February 14, 2007.
51 FDCBP Development Credit Agreement between the Government of India and the International Development Association, p. 7 (Sep. 29, 2003).
The 38 contracts were awarded in 10 of the 16 equipment tenders, which included six awarded through ICB procedures and four NCB procedures.\(^{32}\)

The 38 contracts reviewed constituted 59 percent of the 64 contracts for which the DIR was provided documentation and 49 percent of the total 77 equipment contracts in the FDCBP. On the basis of value, the 38 contracts represent 78 percent of equipment contracts awarded for which the DIR was provided documentation.\(^{33}\)

**Implementation of Equipment Contracts**

The DIR reviewed the implementation of equipment by conducting field visits to food and drug laboratories and offices that had received equipment from the winning contractors to review the condition of the equipment. The DIR’s review covered laboratories and offices within all five of the DIR states—Uttar Pradesh, Maharashtra, Chhattisgarh, Orissa, and Karnataka—and constituted a visit to every laboratory and office that had received equipment under the FDCBP, a total of 15 food and drug laboratories and two offices:

**Uttar Pradesh**
- Central Indian Pharmacopoeia Laboratory, Ghaziabad, Uttar Pradesh (CIPL Ghaziabad)
- Food Research and Standardization Laboratory, Ghaziabad, Uttar Pradesh (FRSL Ghaziabad)
- Public Health Laboratory, Meerut, Uttar Pradesh (PHL Meerut)
- Food and Drug Testing Laboratory, Lucknow, Uttar Pradesh (FDTL Lucknow)

**Maharashtra**
- Public Health Laboratory, Thane, Maharashtra (PHL Thane)
- State Drug Control Laboratory, Mumbai, Maharashtra (SDCL Mumbai)
- Food and Drug Laboratory, Mumbai, Maharashtra (FDL Mumbai)
- Public Health Laboratory, Pune, Maharashtra (PHL Pune)

---


\(^{33}\) The DIR was not able to calculate contracts reviewed as a basis of the value of all 77 equipment contracts because, due to lack of documentation, the DIR does not know the value of the additional 13 equipment contracts.
State Drug Control Laboratory, Aurangabad, Maharashtra (SDCL Aurangabad)

**Chhattisgarh**
- State Food and Drug Laboratory, Raipur, Chhattisgarh (SFDL Raipur)
- Orissa
  - State Drug Testing and Research Laboratory, Bhubaneswar, Orissa (SDTRL Bhubaneswar)
  - Public Health Laboratory, Bhubaneswar, Orissa (PHL Bhubaneswar)
  - Office of the Director General, Health and Family Welfare, Bhubaneswar, Orissa

**Karnataka**
- Public Health Laboratory, Bangalore, Karnataka (PHL Bangalore)
- State Drug Laboratory, Bangalore, Karnataka (SDL Bangalore)
- Central Food Laboratory, Mysore, Karnataka (CFL Mysore)
- Office of the Director, Health and Family Welfare, Bangalore, Karnataka.

The DIR conducted its site visits of these locations between March 15 and April 12, 2007. The site inspection team consisted of the DIR's senior investigators and a local consultant for administrative support. A civil engineer accompanied the team to four laboratories to inspect the civil works and some of the equipment.

Although the DIR's review focused on five states, laboratory and office equipment has been provided to most Indian states under the FDCBP. The equipment that the DIR inspected at the 15 laboratories and two offices represents 19 percent of the total value of equipment from the 64 contracts for which HSCC provided documentation. The DIR's inspection focused only on delivered and unpacked equipment. It was unable to inspect equipment still packed in its box due to the project requirement that equipment had to be unpacked in front of the supplier's engineers, who were not present during the DIR.

The DIR also requested and received information from HSCC on the payment status for contracts under the DIR's review.
Procurement of Civil Works Contracts

The DIR reviewed the procurement of civil works by reviewing documentation requested from and provided by HSCC which comprised documentation for all 10 civil works tenders, representing 33 civil works contracts. The documentation included ITBs, BERs, bids, and contract award agreements. The documentation was generally complete, except for an occasional missing bid from a losing bidder.

Out of the 33 civil works contracts, the DIR analyzed the following nine contracts for civil works projects in the five DIR states:

**Uttar Pradesh**
- Renovation of Central Indian Pharmacopoeia Laboratory, Ghaziabad, Uttar Pradesh (CIPL Ghaziabad)
- Construction of Central Food Laboratory, Ghaziabad, Uttar Pradesh (CFL Ghaziabad)
- Renovation of FDTL Lucknow
- Construction of State Food Laboratory, Gorakhpur, Uttar Pradesh (SFL Gorakhpur)

**Maharashtra**
- Construction of Food and Drug Laboratory, Mumbai, Maharashtra (FDL Mumbai)
- Renovation of Port Health Organization, Mumbai, Maharashtra (PHO Mumbai)

**Orissa**
- Renovation of State Drug Testing and Research Laboratory, Bhubaneswar, Orissa (SDTRL Bhubaneswar)

**Chhattisgarh**
- Construction of State Food and Drug Laboratory, Raipur, Chhattisgarh (SFDL Raipur)

**Karnataka**
- Expansion of State Drug Laboratory, Bangalore, Karnataka (SDL Bangalore).
The total value of these nine projects (USD 5.0 million) represents 42 percent of the total value of civil works budgeted under the FDCBP (USD 12.1 million).54

**Implementation of Civil Works**

The DIR reviewed the implementation of civil works by conducting visits to nine civil works sites, which represent all but one of the civil works sites in the five DIR states. The nine sites also correspond to the nine civil works procurements reviewed by the DIR.

The DIR conducted its site visits between March 15 and April 12, 2007. The site inspection team consisted of senior investigators and a local consultant for administrative support. A civil engineer accompanied the team to four of the nine civil works sites to assess the condition of the structures and their construction. For his review of the other five sites not visited, the civil engineer reviewed detailed photos of the structures taken by the inspection team.

**Complaints**

The DIR retrieved complaints related to the FDCBP retrieved from the Bank’s IRIS database. The DIR also reviewed complaints received by the World Bank Office Delhi.

**Project Reports and Assessments**

The DIR analyzed the project’s reports and assessments by reviewing the Bank’s prior-procurement reviews, a post-procurement review report, and aides-mémoire.55 The DIR reviewed all prior-reviews conducted for equipment and civil works procurements. The DIR was able to locate documentation related to only one post-procurement review.56 The DIR reviewed six FDCBP aides-mémoire.57
Findings

The DIR observed numerous and varied problems in its review of equipment and civil works procurement under the FDCBP, indicating the presence of fraud and corruption. In addition, the DIR found significant deficiencies in the implementation of the equipment and civil works procured under the FDCBP. While only a full investigation can establish a causal link between the procurement issues and implementation deficiencies identified by the DIR, the DIR nonetheless notes that there appears to be a correlation between widespread indicators of favored bidders in procurement and deficiencies in implementation.

The DIR also found that procurement officials ineffectively performed their roles when administering problematic procurements; issuing payments to suppliers for equipment not delivered or for defective equipment; supervising deficient civil works; and issuing completion certificates for projects not completed. Similarly, Bank project reports and assessments did not identify the widespread nature of these issues.

Equipment Procurement

In its review of the procurement of equipment under the FDCBP, the DIR detected a high percentage of problematic procurements indicating that some bidders were favored over others and suggesting fraud and corruption in the procurement process. Of the 38 equipment contracts reviewed, 29 contracts (76 percent) contained indicators that bidders were favored through problematic procurement processes (Figure 1). These procurement issues may be the result only of ineffective performance by procurement officials in fulfilling their responsibilities. However, there are indicators of deliberate efforts by procurement officials to favor certain bidders over others.
The percentage of the total pieces and total value of equipment procured for which issues were detected was even higher, at 87 percent and 88 percent, respectively.

The types of issues detected by the DIR varied. In total, 12 different types of issues appeared in the procurement processes reviewed. The frequency of each type of issue in the equipment procurements reviewed is listed in Figure 2.
Notably, none of the DIR’s findings suggest the existence of collusive behaviors or cartels. Suppliers winning contracts varied greatly, and no suspicious patterns in the award of contracts across tenders were detected. Moreover, the submission of complaints by bidders against one another supports the conclusion that they were not collaborating to manipulate the equipment procurement process.58

The MOHFW installed a “steering committee” to review bid submissions. in addition to the activity of the steering committee, the DIR noted other issues that highlight, at a minimum, deficiencies in procurement and might also indicate fraud and corruption. These findings can generally be classified into four categories: (1) inconsistent administration of the procurement process in selecting suppliers; (2) interference with procurement process and procedures; (3) findings with respect to certain suppliers that were unsupported by the suppliers’ bids; and (4) contract awards to suppliers that had submitted seemingly fraudulent documents.

The DIR also found that a high percentage of bidding companies were disqualified in most of the tenders, which can be an additional indicator of corrupt practices. However, this is tempered by the fact that FDCBP equipment procurements involved highly specialized equipment that several companies, including many local Indian companies, were not qualified to provide. Thus, the DIR does not promote this finding as an indicator of corrupt practices on its own.

A. The Steering Committee

Under the FDCBP, HSCC was the project’s PSA which, pursuant to the project appraisal document (PAD), was to manage the procurement of all civil works, goods, equipment, furniture, and other items.59 In the project’s procurement process, the MOHFW normally bases its contract awards on the recommendations of the BEC, a body that functions under the auspices of the PSA and provides its findings in the BER. However, in at least three of the tenders in the FDCBP, the MOHFW established a special committee—the steering committee, now called the Integrated Purchase Committee—that participated in the procurement process as well, by offering its own second set of recommendations on bidder responsiveness.

58  See, e.g., Agilent Technologies letter to the Bank (Dec. 5, 2003); Agilent Technologies letter to the Bank (Dec. 15, 2003); Gestetner letter to HSCC (Nov. 10, 2003); Jeol Limited letter to the Bank (Feb. 24, 2004); Chemito letter to HSCC (Mar. 17, 2004); Thermo Electron Corporation letter to the Bank (Jul. 2, 2004); Thermo Electron Corporation letter to the MOHFW (Jul. 26, 2004); Chromline Equipment letter to the MOHFW (Aug. 13, 2004); Thermo Electron Corporation letter to the Bank (Oct. 4, 2004); Micro Devices Metrohm letter to HSCC (Dec. 15, 2005); Perkin Elmer Instruments letter to HSCC (Jan. 11, 2006); Micro Devices Metrohm letter to HSCC (Jan. 25, 2006); Micro Devices Metrohm letter to HSCC (Feb. 2, 2006); and Perkin Elmer Instruments letter to HSCC (Feb. 8, 2006).

59  PAD, p. 39.
1. The DIR's Limited Understanding of the Steering Committee

The DIR's understanding of the precise role of the steering committee and the extent to which that committee participated in the procurement processes is limited, due to the absence of complete documentation describing the steering committee's work. Based on available documentation, the DIR has learned that the steering committee participated to some extent in at least three tenders: HSCC/PUR/CBP(F&D)/ICB-1A/2003,60 HSCC/PUR/CBP(F&D)/ICB-1D/2003,61 and HSCC/PUR/CBP(F&D)/ICB-1/2004.62 The DIR has seen no evidence that the steering committee participated in additional tenders, though the possibility of such participation cannot be ruled out.

The DIR received information on the steering committee from a letter written by the MOHFW to the Bank in 2004.63 The letter stated that the steering committee's role in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003 was to examine HSCC's BER. The letter explained that the steering committee was assisted by two subcommittees, a committee of technical members, and a committee of commercial members. These subcommittees were responsible for determining whether the BER's technical and commercial findings regarding the bids were accurate.64 The steering committee then reported to the MOHFW on the technical and commercial responsiveness of the bidders upon which the MOHFW would make its final decisions on the award of contracts.

2. The DIR's Observations Regarding the Steering Committee's Tendency to Overrule the BER

The steering committee's findings as to bidder responsiveness often differed from the findings in the BER. Furthermore, the MOHFW always based its award of contract on the steering committee's findings and not the findings in the BER. The fact that the steering committee did not explain the reasoning behind many of these decisions in its minutes and letters raises questions as to the transparency of the procurement process.

60 MOHFW letter to Bank (Jul. 21, 2004).
61 Steering committee minutes (Feb. 24, 2004).
63 MOHFW letter to Bank (Jul. 21, 2004). The DIR reviewed four other documents that contain information on the role performed by the steering committee in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003. See MOHFW letter to Bank (Dec. 13, 2004); Steering committee minutes (undated); MOHFW letter to Bank (Feb. 4, 2005); Report signed by steering committee technical members (Mar. 8, 2004).
64 MOHFW letter to Bank, p. 1 (Jul. 21, 2004).
In the tender for which the DIR has the most information on the steering committee's role, tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the DIR determined that the steering committee overruled the BER in the procurement processes for 10 of the 15 items, or 67 percent of the time.\(^5\) Given the lack of relevant documentation, the DIR has been unable to calculate similar data for other tenders in which the steering committee participated.

In many instances the steering committee overruled the BER without providing an explanation for its decision. For example, for the procurement of a High Performance Liquid Chromatograph in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the steering committee overruled the BER recommendation when it disqualified Perkin Elmer Instruments, a lower bidder that the BER had declared responsive, and recommended the award of contract to Waters India, a higher bidder.\(^6\) Accepting the steering committee's recommendation, the MOHFW awarded the contract to Waters India.\(^7\)

In that procurement, the BER reported the bids of Perkin Elmer Instruments and Waters India to be technically and commercially responsive.\(^8\) The remaining five bids were declared to be non-responsive.\(^9\) The BER recommended the lowest evaluated responsive bidder, Perkin Elmer Instruments, for the award of the contract.\(^10\) The steering committee then reviewed the bids. Although the BER had reported Perkin Elmer Instruments to be in compliance with the technical specifications,\(^11\) the steering committee's technical members declared the company to be technically non-responsive.\(^12\) Instead, the steering committee declared the bid of Waters India to be responsive and approved it for the contract.\(^13\)

By declaring Waters India to be responsive while disqualifying Perkin Elmer Instruments, the steering committee failed to recognize Waters India's technical noncompliance. The DIR's review of the technical evaluation documents reveals that Waters India did not comply with at least eight parameters.\(^14\) Out of these eight, the Bank itself noted six deviations and requested that the MOHFW clarify

\(^5\) Ibid.; steering committee minutes (undated).
\(^6\) Steer Committee minutes, sec. on HPLC (undated).
\(^7\) Contract Award Agreement with Waters India (Apr. 18, 2005).
\(^8\) BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 49 and 266 (Feb. 19, 2004)
\(^9\) Ibid., pp. 29–32.
\(^10\) Ibid., p. 55.
\(^11\) Ibid., p. 49.
\(^12\) Steering committee minutes, sec. on HPLC (undate).
\(^13\) Ibid.
\(^14\) BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 275-278 (Feb. 19, 2004).
Waters India's bid before awarding the contract. The DIR notes that Waters India was asked to clarify but that it did not, and was awarded the contract anyway. Thus, the steering committee overruled the BER on questionable grounds.

The DIR also notes that the Bank hired an independent technical expert consultant from the National Health Service in the United Kingdom, who in 2004 reviewed findings related to technical specifications in the FDCBP's equipment procurement process. The DIR is unaware of the extent of the consultant's review but understands that the consultant reviewed the same tender, HSCC/PUR/CBP(F&D)/ICB-1A/2003, and e-mailed his findings to the Bank's procurement staff.

Although the consultant acknowledges that HSCC did not provide him with all documentation regarding this tender, the consultant also questions the role of the steering committee based on the review he conducted: “What is the point of having HSCC as a procurement agent being paid to do the commercial and technical evaluations (on behalf of MOHFW) if MOHFW has its own parallel system in place repeating the same work?” The consultant’s opinions support the concerns that the DIR raises with respect to the steering committee's role.

It is not clear whether or not Bank officials took action based on the consultant's observations regarding the lack of need for a steering committee. The documentation that the DIR has reviewed does not reveal that the Bank has made any follow-up efforts regarding the expert consultant's important observations.

3. The Steering Committee’s Questionable Findings

In addition to the DIR's observation that the steering committee often overruled the BER in a non-transparent way, the DIR found two specific examples of conclusions made by the steering committee that more strongly suggest its tendency to favor one bidder over another.

The Steering Committee Reached Inconsistent Findings with Respect to Two Bidders Whose Levels of Bid Responsiveness Were Similar, Disqualifying One Bidder While Recommending the Contract to the Other. For the procurement of an HPLC isocratic system with 10 columns, two integrators, and one degassor in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the steering committee

---

75 Bank letters to MOHFW, sec. on HPLC (Nov. 19, 2004 and Jan. 13, 2005).
76 Contract Award Agreement with Waters India (Apr. 18, 2005).
77 David Porter e-mail to the Bank (Nov. 9, 2004).
78 Ibid.
79 Ibid.
reached a conclusion that differed from the BER’s recommendation in a way that favored a higher bidder, Waters India, over a lower bidder, Indtech Analytical, even though both bidders’ proposals had similar discrepancies with the required tender criteria.  

The BER had reported the bids of Thermo Finnigan, Indtech Analytical, and Waters India to be technically and commercially responsive. It declared the remaining six bids to be non-responsive. The BER recommended the lowest evaluated responsive bidder, Thermo Finnigan, for the award of contract.

The steering committee’s technical members then examined the BER and reported that Thermo Finnigan’s bid was technically non-responsive with respect to five criteria and that Waters India and Indtech Analytical substantially complied with the technical specifications. For Indtech Analytical the technical members stated that the bid was “substantially responsive except for multi-wavelength option and fuses, loops, tubes, spanners and syringes not mentioned.” For Waters India the technical members stated that the bid was “substantially complying to the requirement except that there is a provision for dual-wavelength as against requirement of multi-wavelength operation besides quoted for one number of Hamilton micro-liter syringe as against requirement of two.” The steering committee’s technical members thus overruled the BER’s recommendation in finding Thermo Finnigan to be non-responsive and also found that Waters India and Indtech Analytical were in substantial compliance with the bid requirements despite minor discrepancies between their bids and the required technical criteria.

The steering committee held detailed discussions four days later on the technical members’ observations. According to the steering committee’s minutes, the technical members changed their assessment of Indtech Analytical’s bid in their meeting. Although the technical members had approved the company’s technical specifications as substantially responsive four days earlier, they now concluded that the company’s bid could be disregarded because it did not meet an important parameter—the company had offered to supply only nine syringes instead of the

---

80 Steering committee minutes, sec. on HPLC Isocratic System (undated).
81 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 49 and 282–83 (Feb. 19, 2004)
82 Ibid., pp. 32–34.
83 Ibid., p. 55.
84 Report of Steering committee’s technical members, sec. on HPLC Isocratic System (Mar. 8, 2004).
85 Ibid.
86 Ibid.
87 Steering committee minutes, sec. on HPLC Isocratic System (date unknown).
required 11. Based on the technical members’ comments, the steering committee chose not to seek clarification from Indtech Analytical on its minor deviations and declared the company to be non-responsive.

The steering committee did not provide any explanation for why it disqualified Indtech Analytical based on such a minor discrepancy in its bid while at the same time recommending the award of the contract to Waters India, another company with a similar minor discrepancy. In contrast to its treatment of Indtech Analytical, the steering committee chose to seek clarification from Waters India on its issues of wavelength type and number of syringes. Waters India clarified its specifications, and the steering committee approved Waters India for the award of the contract. The fact that the steering committee chose to seek clarifications from Waters India, a higher bidder by approximately USD 35,000, and not from Indtech Analytical supports the unusual nature of the steering committee’s findings.

Based on documentation in the record, it appears that the steering committee’s change in assessment of Indtech Analytical from substantially responsive to non-responsive might be due to pressure placed on the technical members to take a new position. Supporting this theory is a complaint from International Engineers discussing the procurement process for this tender in general. The complainant alleges problems with HSCC and the steering committee, claiming, among other things, that Dr. S. K. Talwar, the head of the technical committee, was forced to withdraw award recommendations for certain bidders because of pressure from the Chief General Manager (Procurement), HSCC, Mr. M. P. Gupta. Although only a full investigation can establish the merits of this allegation, the complaint does corroborate the suspicious nature of the technical members’ change in findings. It is unclear from the documentation reviewed whether the Bank took any follow-up action on this complaint.

**The Steering Committee Overruled the BER Even When the Same Individuals Served on Both the BEC and the Steering Committee.** For the procurement of Microwave Digestion Units in tender HSCC/PUR/CBP(F&D)/ICB-1D/2003, the BER declared bidder CEM Corporation to be non-responsive, and the steering committee reversed this decision and awarded the contract to the company. Note-
worthy was the fact that two of the individuals serving on both the BEC and the steering committee reversed, while sitting on the steering committee, their previous conclusions on CEM Corporation’s responsiveness as participants of the BEC.

While serving as technical experts on the BEC, Dr. S. K. Talwar and Mr. D. S. Rawat examined the technical specifications submitted by the bidders and expressed concerns associated with CEM Corporation’s bid: “M/s CEM Corporation, USA has quoted for Mars 5 model. It is observed that there are two catalogues attached with the bid for the same model but with different specifications. The bidder has included in their quotation the specified word by word as included in the tender. Though, they are not corroborated by the catalogues attached therewith. However, the maximum pressure as included in the catalogue is 800 PSI as against the requirement of 1450 PSI in the control vessel.”\textsuperscript{95} Based on this finding, the BER reported the bid of CEM Corporation to be technically non-responsive.\textsuperscript{96} It also reported the bids of Milestone Microwave Laboratory Systems and Perkin Elmer Instruments to be technically and commercially responsive, recommending that the contract be awarded to the lowest evaluated responsive bidder, Milestone Microwave Laboratory System.\textsuperscript{97}

The steering committee then considered the technical experts’ assessment and rejected the BER recommendation.\textsuperscript{98} “The steering committee approved CEM Corporation for the contract award.”\textsuperscript{99} Addressing the contradictions in CEM Corporation’s bid that had been identified by the BEC’s technical experts, the steering committee chose to rely on the document that the company had signed in its submission.\textsuperscript{100} To support this approach, the steering committee referred to a meeting where it had been presented with similar evidence and where it had decided that “since the catalogue is not signed by the firm the assessment [sic] be made on the basis of the offer submitted by the firm, which is duly signed.”\textsuperscript{101} To address the fact that CEM Corporation’s quotation in its signed document reflected “word by word” the tender specifications, which is unusual in a highly technical procurement, the steering committee stated that it had instructed HSCC to seek clarifications from the firm regarding the accuracy of its quotation, that HSCC had sought clarifications, and that the company had confirmed that its offered model fully met

\textsuperscript{95} BER, HSCC/PUR/CBP(F&D)/ICB-1D/2003, p. 171 (Feb. 6, 2004).
\textsuperscript{96} Ibid., pp. 12–17.
\textsuperscript{97} Ibid.
\textsuperscript{98} Steering committee minutes, pp. 3–4 (Feb. 24, 2004).
\textsuperscript{99} Ibid.
\textsuperscript{100} Ibid.
\textsuperscript{101} Ibid.
all the criteria. The DIR has not been made aware of evidence that clarifications were actually sought and provided. Based on the steering committee’s analysis, the MOHFW awarded the contract to CEM Corporation.

The DIR found that technical experts Dr. Talwar and Mr. Rawat, in addition to serving as members of the BEC, also served as members of the steering committee for this procurement. Thus, these same technical experts, who had initially declared CEM Corporation as technically non-responsive, now signed the steering committee minutes endorsing the steering committee’s decision to award the contract to CEM Corporation. While only a full investigation can determine whether HSCC indeed received clarifications from CEM Corporation regarding the accuracy of its bid submission assertions, which would arguably justify the technical experts’ change in findings, the fact that neither the steering committee nor HSCC included such important clarification documents in the bid materials is an indicator of suspicious behavior in this procurement process.

Corroborating the unusual nature of the conflicting decisions by the technical experts, the DIR notes that International Engineers, a company that claimed not to participate in the tenders out of concern for the integrity of the procurement process, submitted complaints regarding the participation of Dr. Talwar, one of the technical experts. The complaints allege that Dr. Talwar had provided dissenting views in other procurement processes and that these views were generally ignored by the MOHFW. In one complaint International Engineers alleged that Dr. Talwar had withdrawn his recommendation from one procurement in writing and that the MOHFW wrongly failed to take notice of this withdrawal. The complaint cited this irregularity as one example of “manipulations” and “hoodwinking” in the procurement process. A second complaint submitted by the same company urged the authorities to reevaluate this procurement process and stated: “We are confident that after a fresh comparison is done the manipulation would emerge to strongly support the reason of withdrawal of recommendations by Dr. Talwar.” The fact that International Engineers did not attempt to participate in

---

102 Ibid.
103 Contract Award Agreement with CEM Corporation (Jul. 26, 2004).
104 Steering committee minutes, p. 5 (Feb. 24, 2004).
105 Ibid.
106 International Engineers Complaint (May 31, 2004); and International Engineers Complaint (Jun. 8, 2004).
107 Ibid.
109 Ibid.
110 International Engineers Complaint (Jun. 8, 2004).
the procurement processes adds an element of merit to its allegations—unlike other complainants, this company was not a bidder that submitted a complaint after it had already lost a bidding round.

The DIR notes that the signature block of Dr. Talwar in the steering committee minutes for this tender contains two signatures. Alongside one of his signatures Dr. Talwar wrote “Refer to my note dt-15/3/04.” The DIR has not been provided with, or reviewed, Dr. Talwar’s note of March 15, 2004, and the exact nature of this note is unknown. However, that Dr. Talwar reached contradictory findings with respect to the responsiveness of CEM Corporation, that complaints were submitted alleging that the MOHFW ignored Dr. Talwar’s dissents in other procurements, and that Dr. Talwar’s signature appears to be qualified are indicators that Dr. Talwar’s endorsement of the steering committee’s findings might not be voluntary.

Based on these examples of irregularities in the equipment procurement process related to the role of the steering committee, it appears that certain bidders have been favored in the award of contracts.

B. Other Indicators of Preferential Treatment of Suppliers

In addition to the participation of a steering committee that often overruled the BER recommendations, the DIR identified numerous other indicators of fraud and corruption where certain suppliers received preferential treatment. These varied indicators can generally be classified into four categories: (1) inconsistent administration of the procurement process in selecting suppliers; (2) interference with procurement processes and procedures; (3) findings with respect to certain suppliers that were unsupported by the suppliers’ bids; and (4) contract awards to suppliers that had submitted seemingly fraudulent documents.

1. Inconsistent Administration of the Procurement Process

The DIR’s review of equipment procurement under the FDCBP revealed that HSCC and the MOHFW’s steering committee often administered the procurement process inconsistently with respect to different suppliers. For example, the DIR identified situations where HSCC sought clarification from one bidder that was in substantial compliance with the required specifications and not from another lower bidder that was also in substantial compliance with the required specifications, recommending the higher bidder for the contract. In other instances HSCC and/or the steering committee reached inconsistent findings as to whether a specific item met the MOHFW’s specification requirements.

111 Steering committee minutes (Feb. 24, 2004).
HSCC Made Inconsistent Requests for Clarifications from Substantially Responsive Bidders within the Same Procurement. Pursuant to Bank guidelines, HSCC has the discretion to seek clarifications from bidders in order to seek additional information and determine whether the bidders’ proposals to supply equipment meet the specifications required by the MOHFW. Bank guideline 2.45 states that “the Borrower shall ask bidders for clarification needed to evaluate their bids.”112 In order for the clarification to be proper, the bid must already be substantially responsive. Bidders with major deviations are automatically disqualified.113

In the procurement of equipment under the FDCBP, HSCC and/or the steering committee at times sought clarifications from substantially responsive bidders but did so in an inconsistent manner, which had the effect of favoring some bidders that had the opportunity to bring their proposals into compliance and disfavoring other bidders that were not afforded such an opportunity. Particularly egregious examples of this inconsistent administration of the procurement process were instances where HSCC and/or the steering committee inconsistently sought clarifications within the same procurement process for the same item.

For example, for the procurement of an HPLC isocratic system with 10 columns, two integrators, and one degassor in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, though two bidders had minor deficiencies in their bids, the steering committee chose to seek clarifications from Waters India, a higher bidder, and not from Indtech Analytical, a lower bidder.114 As discussed in the previous section on the steering committee, for this procurement the BER reported the bids of Thermo Finnigan, Indtech Analytical, and Waters India to be technically and commercially responsive and recommended the lowest evaluated responsive bidder, Thermo Finnigan, for the award of contract.115 The steering committee’s technical members then overruled the BER’s recommendation in finding that Thermo Finnigan’s bid was technically non-responsive and that Waters India and Indtech Analytical substantially complied with the technical specifications despite minor discrepancies between their bids and the required technical criteria.116

Based on the technical members’ comments, the steering committee chose not to seek clarification from Indtech Analytical and declared the company to be non-

112 Guidelines-Procurement under IBRD Loans and IDA Credits, p. 25 (Jan. 1999) (this version of the Guidelines is the version that was effective during the period under review).
114 Steering committee minutes, sec. on HPLC Isocratic System (undated).
responsive. With respect to Waters India the steering committee chose to seek clarification for the deficiencies identified by the technical members. Waters India submitted a letter clarifying that its specifications were in compliance with the tender. Based on this clarification the steering committee approved the award of the contract to Waters India. Thus, the steering committee appears to have applied inconsistent standards in its assessment of two substantially responsive bidders, choosing to seek clarification for Waters India and recommending that Waters India receive the award, while not seeking clarification for Indtech Analytical, the lower bidder.

**HSCC Reached Inconsistent Findings as to Whether a Specific Item Met Specification Requirements.** In several instances HSCC determined that a specific item model did not meet the required specifications and, in another tender requiring the same specifications, determined that the exact same model of equipment did meet the specifications. The model in each instance, though offered in a later year, was the exact same product as the model offered in the earlier tender. Such inconsistency could be attributed to the fact that HSCC was simply not performing its responsibilities effectively, but is, at a minimum, unusual and questionable.

For example, while the BER found that Shimadzu Asia Pacific’s model 2010 was technically non-responsive under a 2003 tender for a gas chromatograph mass spectrophotometer, the same model was declared technically responsive in a 2004 tender. The tender technical specifications for this item under both tenders were exactly the same. Two of the three technical experts, Dr. S. K. Handa and D. S. Rawat, who assessed the technical specifications for one tender had also assessed the technical specifications of this item in the other tender. The inconsistency calls into question one of the experts’ assessments of model 2010.

The DIR also detected inconsistent findings with respect to the same item of equipment in the procurement of an atomic absorption spectrophotometer with a hydride generator mercury vapor generator (AAS) in a 2003 tender and a 2005 ten-

---

117 Steering committee minutes, sec. on HPLC Isocratic System (undated).
118 Ibid.
119 Waters India letter to HSCC (Jun. 12, 2004).
Bidder Thermo Electron Corporation's product was found to be technically non-responsive in the 2003 tender and technically responsive in the 2005 tender. In the 2005 tender for this item Thermo Electron Corporation was also declared the lowest evaluated responsive bidder. All technical specifications required for this item in the 2003 tender were identical to the technical specifications required for this item in the 2005 tender. In both tenders Thermo Electron Corporation submitted bids to supply the exact same model. Such inconsistent findings suggest favoritism in the procurement process.

The DIR also identified similar inconsistent treatment for the procurement of a Fourier Transform Infrared (FT-IR) spectrophotometer in a 2003 tender and a 2004 tender. In both tenders the technical criteria required for the FT-IR spectrophotometer was identical. For both tenders Perkin Elmer Instruments quoted the same model. The BER's technical evaluation statement in the 2004 tender was prepared by Dr. Handa, Mr. Rawat, and Dr. G. N. Singh. Except for Dr. Singh, the other two technical experts also served as the steering committee's technical members in the 2003 tender for this item. Despite the similarities of the procurement of this item in both tenders, Perkin Elmer Instruments was declared technically non-responsive in the 2003 tender and technically responsive in the 2004 tender, raising questions as to the consistency of the process.

In the 2003 and 2004 tenders for the FT-IR spectrophotometer, the technical experts also acted inconsistently with respect to reliance on a bidder's compliance statement and catalogue to assess the bidder's technical compliance. In the 2003

---

124 See tenders HSCC/PUR/CBP(F&D)/ICB-1A/2003, Section VII, p. 1 (Mar. 18, 2003), and BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 92 (Mar. 20, 2006).
126 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 9 (Mar. 20, 2006). The BER in the 2005 tender for this item did not ultimately recommend the award to Thermo Electron Corporation since the company was found to be non-compliant with the post-qualification criteria.
128 Ibid.
133 See letter from the MOHFW to the Bank (Jul. 21, 2004) and Report of steering committee's technical members, sec. on FT-IR (Mar. 8, 2004).
Detailed Implementation Review, India Health Sector

tender for this item Perkin Elmer Instruments and Shimadzu’s products were both declared technically non-responsive because the technical information about the products in the supporting product literature did not comply with the technical parameters of the tender.135 However, in the 2004 tender for this item the technical experts found these same companies’ products to be technically compliant by relying only on the technical specifications that the companies provided in their compliance statements. In the 2004 tender the technical experts did not choose to consider any supporting literature to ensure that the companies’ compliance statements were accurate.136

In the procurement of a micro array in a 2004 tender, the steering committee’s technical members also relied only on DSS Imagetech’s compliance statement in finding that several technical parameters were met.137 The DIR reviewed the bidder’s corresponding catalogue and found that a number of the required criteria in the procurement were in fact not met by the bidder, despite the bidder’s claims of compliance in its compliance statement.138 In a 2003 tender for this item requiring the same technical specifications and involving two BEC members that were technical members in the 2004 tender, DSS Imagetech had submitted a bid for the exact same item model.139 In that tender the BER and the steering committee concluded that the model was technically non-responsive with respect to several parameters, including the ones that the DIR had found were not met in the 2004 tender.140 Had the technical members consulted the company’s catalogue in the 2004 tender, as they had done in the earlier tender, they would likely have concluded that DSS Imagetech was technically non-responsive. Instead, the steering committee recommended DSS Imagetech for the award in the 2004 tender, and the MOHFW awarded the contract to the company.141

On January 11, 2006, and February 8, 2006, Perkin Elmer India wrote letters to the MOHFW, copying HSCC and the Bank.142 In its letters Perkin Elmer India alleged that the bid of DSS Imagetech had major deviations, corroborating the

---

137 Ibid., pp. 62–63.
140 BER, HSCC/PUR/CBP(F&D)/ICB-1D/2003, pp. 13–14 (Feb. 6, 2004); Steering committee minutes, p. 3 (Feb. 24, 2004).
141 Contract Award Agreement with DSS Imagetech (Feb. 2, 2006).
142 Perkin Elmer India letter to the MOHFW (Jan. 11, 2006); Perkin Elmer letter to the MOHFW (Feb. 8, 2006).
issues that the DIR has detected. The Bank forwarded Perkin Elmer India’s letters to the MOHFW and HSCC on January 30, 2006, and February 27, 2006, and requested that the MOHFW take necessary action. The MOHFW awarded the contract to DSS Imagetech, despite the complaints filed by Perkin Elmer India and despite the Bank’s request for necessary action. The DIR was unable to determine whether the Bank has followed up on the two complaints submitted by Perkin Elmer India.

2. Interference with the Procurement Processes and Procedures

The DIR discovered that in several instances of equipment procurement under the FDCBP, the MOHFW and HSCC interfered with the standard procurement processes and procedures in ways that appeared to favor some bidders over others.

Procurement Officials Allowed Unreasonable Delays in the Award of Contracts. Bank guidelines 2.56 and 2.58 state that the borrower shall complete its evaluation of bids and award the contracts within the initial period of bid validity so that extensions are not necessary. Bank guideline 2.56 further states that extensions of bid validity, if justified by exceptional circumstances, shall be requested in writing from all bidders before the expiration date. Despite these requirements, the DIR found that the MOHFW and HSCC took exceptionally long periods of time to evaluate bids and award contracts to selected suppliers.

The DIR recognizes that long delays in the procurement process might be attributable to many different factors. Isolated delays could be due to communication difficulties with bidders, transportation complications for procurement officials, or technical complexities for certain items. However, considerable patterns of long delays that repeatedly occurred over a significant period of time may be an indicator of possible corruption in the procurement process. Repeated delays provide procurement officials and bidders with time to devise and implement corruption schemes if the officials and bidders are prone to such actions. Such delays have occurred repeatedly under the FDCBP, meriting closer attention.

For example, in tender HSCC/PUR/CBP(F&D)/NCB-1C/2003, there was a time difference of almost two years between the bid opening date and the contract award dates. In tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, HSCC sub-
mitted the BER to the MOHFW, and for all contracts in the tender, an average of almost a year passed before the steering committee concluded its review and the MOHFW signed the contracts with the winning bidders.148 In tender HSCC/PUR/CBP(F&D)/ICB-1B/2003, HSCC did not submit the BER until five and a half months after it opened and began evaluating the bids.149 For one item in that tender the contract was awarded about 10 months after the bids were submitted and five months after the BER was issued.150 For two items in that tender the contracts were awarded approximately two years after the bids were submitted and almost one and a half years after the BER was issued.151 The DIR did not see any evidence that the MOHFW was justified in delaying the award of contracts in any of these tenders or that procurement officials requested in writing that bidders agree to an extension, pursuant to Bank guidelines.

**Procurement Officials Changed the Bidding Deadlines and Requirements after the Procurement Process Had Begun.** In tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, HSCC changed the bid submission deadline and the required technical specifications after the bidding process had already begun. HSCC extended the bid submission deadline from December 17, 2003, to January 14, 2004.152 Then on January 8, 2004, HSCC wrote to all prospective bidders with information that the technical specifications for eight items had been amended.153 The change in technical specifications just six days prior to the submission of bids raises the concern that the amendment was done to favor certain bidders by tailoring required specifications to the specifications of certain bidders’ products. The Bank raised similar concerns with respect to the narrowness of the altered specifications: “However, we are a little uneasy that the . . . specification might not have been sufficiently generic to ensure fair competition – see for example conformity of certain design features of the Anchrom instrument with the technical specifications in the bid document viz, S. Nos. A7, D3, D9, D12, D13. The last one, D13, is more precise than coincidence might explain.”154 Despite this expression of concern, the

---


149 BER, HSCC/PUR/CBP(F&D)/ICB-1B/2003, pp. 1, 4, and 9 (Sep. 22, 2004).

150 Contract Award Agreement with Perkin Elmer Instruments (Feb. 20, 2005).

151 Contract Award Agreements with Electrolab (Feb. 13, 2006).

152 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 2 (Feb. 19, 2004).


154 Bank letter to the MOHFW, sec. on HPTLC (Jan. 13, 2005).
Bank did not object to the award of the contract to Anchrom Enterprises. Corroborating this indicator, the DIR has also reviewed a complaint alleging that this procurement process was drawn in a manner to favor predetermined companies or brands of products. The DIR was unable to determine whether the Bank has followed up on this complaint.

**Procurement Officials Changed the Item Categories in the Middle of the Procurement Process.** The MOHFW also altered two procurement processes for two separate items, a UV-Vis spectrophotometer for food safety and a UV-Vis spectrophotometer for the quality control of drugs, by combining the two procurements into one procurement process after the processes had already begun and after bids had already been reviewed. The DIR found no justifiable basis for the alteration, and the change favored one bidder, Perkin Elmer Instruments, which would have otherwise been disqualified.

In that tender the BEC had evaluated the bids for the UV-Vis spectrophotometer for food safety and had concluded that only Shimadzu Asia Pacific, GBC Scientific Equipment, and Hitachi Hi-Technologies were technically and commercially responsive. The BER had declared that the bid of Perkin Elmer Instruments was technically non-responsive. The BER’s comparative statement on technical evaluation noted Perkin Elmer Instruments’ deviations. The BER recommended the lowest evaluated responsive bidder, Shimadzu Asia Pacific, for the award of contract.

For the second item, the UV-Vis spectrophotometer for the quality control of drugs, the BER had reported that only Perkin Elmer Instruments and Shimadzu Asia Pacific were technically and commercially responsive. Although Perkin Elmer Instruments was the lowest evaluated responsive bidder, the BER declared that Perkin Elmer Instruments did not meet the post-qualification criteria requiring sales of the item in the last three years—the post-qualification statement reports that Perkin Elmer Instruments submitted proof of sales only for the years 1999–2000 and therefore did not satisfy the criteria. On the basis of this infor-

---

156 International Engineers letter to the MOHFW (Jun. 8, 2004).
157 BER, HSCC\PUR\CBP(F&D)\ICB-1A\2003, p. 3 (Feb. 20, 2004).
158 BER, HSCC\PUR\CBP(F&D)\ICB-1A\2003, pp. 43–45 and 51 (Feb. 19, 2004).
159 Ibid., p. 43.
161 Ibid., p. 58.
162 BER, HSCC\PUR\CBP(F&D)\ICB-1A\2003, pp. 45–47 and 51 (Feb. 19, 2004).
163 Ibid., pp. 454–55.
mation, the BER recommended the next lowest evaluated responsive bidder, Shimadzu Asia Pacific, for the contract.\textsuperscript{164}

Despite the BER’s recommendation to award both contracts to Shimadzu Asia Pacific, the MOHFW did not do so. Instead, the MOHFW chose to combine the contracts and award only one contract to Perkin Elmer Instruments.\textsuperscript{165} The MOHFW stated in a letter to the Bank that “since the specification of the equipment at S. No. 14 and 15 required for Food and Drug Labs [which were the two UV-Vis spectrophotometer items at issue] are the same, the Committee decided to procure the equipment from the lowest bidder of the two items.”\textsuperscript{166} The DIR has determined that contrary to what is stated in the MOHFW’s letter, significant differences exist between the technical specifications of the two items.\textsuperscript{167}

Despite the fact that the BER had disqualified Perkin Elmer Instruments for each of the two items, the MOHFW awarded the contract to Perkin Elmer Instruments without an explanation.\textsuperscript{168} The DIR reviewed the bid submissions of Perkin Elmer Instruments and agreed with the BER’s conclusions that the company’s specifications did not comply with the specifications required for the UV-Vis spectrophotometer for food safety\textsuperscript{169} and that the company’s performance statement did not satisfy the post-qualification criteria for the UV-Vis spectrophotometer for the quality control of drugs.\textsuperscript{170} The MOHFW’s decision to override the seemingly valid evaluation in the BER is an indicator that Perkin Elmer Instruments was favored in the procurement process. The DIR has seen no evidence that the Bank objected to the MOHFW’s questionable decisions.

\textit{Procurement Officials Appear to Have Narrowly Drafted a Tender to Favor a Certain Bidder.} Provision 2.19 of the Bank guidelines states: “Standards and technical specifications quoted in bidding documents shall promote the broadest possible competition, while assuring the critical performance or other requirements for the goods and/or works under procurement.”\textsuperscript{171} However, in some cases the narrowness of the specifications appeared to stifle competition rather than promote it.

\begin{itemize}
\item\textsuperscript{164} \textit{Ibid.}, p. 59.
\item\textsuperscript{165} MOHFW letter to Bank, p. 2 (Jul. 21, 2004); Contract Award Agreement with Perkin Elmer Instruments (Oct. 29, 2004).
\item\textsuperscript{166} \textit{Ibid.}
\item\textsuperscript{168} Contract Award Agreement with Perkin Elmer Instruments (Oct. 29, 2004).
\item\textsuperscript{169} BER, HSCC/PUR/CBP/F&D/ICB-1A/2003 pp. 379–80 (Feb. 19, 2004).
\item\textsuperscript{170} \textit{Ibid.}, pp. 454–55.
\item\textsuperscript{171} Guidelines-Procurement under IBRD Loans and IDA Credits, p. 16 (Jan. 1999).
\end{itemize}
For example, for the procurement of a rotary vacuum evaporator in tender HSCC/PUR/CBP(F&D)/ICB-2/2004, the BER reported that the bids of York Scientific Industries and Goel Scientific Glass Works were technically and commercially responsive. The BER declared the bids of the remaining four bidders to be non-responsive. Based on the BER's recommendation, the MOHFW awarded the contract to York Scientific Industries, the lowest evaluated responsive bidder.

York Scientific Industries had submitted a leaflet with its bid that contained a list of its item's technical specifications. The DIR compared the specifications in the leaflet against the required specifications in the tender document and found the two sets of specifications to be almost identical. For example, the tender document required and the company's leaflet provided that the product have a speed range that was 20 rpm to 180 rpm and that the temperature control range be ambient temperature +5 degrees Celsius to +90 degrees Celsius. Copies of the tender specifications and the company's leaflet are in Figure 3, showing the unusually identical nature of how the technical specifications were described.

**Figure 3. Comparison of the Required Tender Specifications and the Specifications in the Leaflet Submitted by York Scientific**

<table>
<thead>
<tr>
<th>Required Tender Specifications</th>
<th>Leaflet Submitted by York Scientific</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical Specifications</strong></td>
<td></td>
</tr>
<tr>
<td>Driving unit speed</td>
<td>Controlled induction motor with electronic speed control</td>
</tr>
<tr>
<td>Temperature range</td>
<td>20 to 180 rpm</td>
</tr>
<tr>
<td>Lifting height</td>
<td></td>
</tr>
<tr>
<td>Transmitting &amp; display</td>
<td></td>
</tr>
<tr>
<td>Safety features</td>
<td></td>
</tr>
<tr>
<td><strong>Aspiration</strong></td>
<td></td>
</tr>
<tr>
<td>Displacement method</td>
<td></td>
</tr>
<tr>
<td>Safety function</td>
<td></td>
</tr>
<tr>
<td>Aspirator fluid</td>
<td></td>
</tr>
<tr>
<td><strong>Rotary Vacuum Evaporator</strong></td>
<td></td>
</tr>
<tr>
<td>Speed range</td>
<td>+5°C to +90°C</td>
</tr>
<tr>
<td>Lifting height</td>
<td></td>
</tr>
<tr>
<td>Transmitting &amp; display</td>
<td></td>
</tr>
<tr>
<td>Safety features</td>
<td></td>
</tr>
<tr>
<td><strong>Aspiration</strong></td>
<td></td>
</tr>
<tr>
<td>Displacement method</td>
<td></td>
</tr>
<tr>
<td>Safety function</td>
<td></td>
</tr>
<tr>
<td>Aspirator fluid</td>
<td></td>
</tr>
</tbody>
</table>

173 Ibid.
The similarities in specifications suggest that HSCC’s technical committee, the body that authored the technical specifications, directly copied the specifications listed on York Scientific Industries’ pre-produced leaflet. If so, York Scientific Industries was given an improper advantage over other bidders in the procurement process.

3. Unsupported Findings in the Procurement Process

The DIR detected several instances in the bid evaluation process where procurement officials reached findings unsupported by the documents in the underlying bids. Such findings suggest that certain bidders were favored in the process.

Procurement Officials Selected Some Bidders for Contracts Even Though the Bidders Did Not Comply with the Procurement’s Post-qualification Criteria, Thereby Failing to Demonstrate Capacity to Perform. In tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the tender document stated that “the bidder shall furnish the information on past supplies and their satisfactory performance in the pro forma given under Section VIII.” The tender document further stated that “bidders shall invariably furnish documentary evidence (Client’s Certificates) in support of the satisfactory supply of the equipment as specified above.” But the procurement officials ignored these criteria and recommended some bidders for the contract even though they had not submitted performance statements or performance certificates. For example, for the procurement of an AAS, GBC Scientific Equipment did not submit any performance certificates. Nonetheless, the steering committee approved the company for the contract award. For the procurement of a nuclear magnetic resonance in the tender HSCC/PUR/CBP(F&D)/ICB-1D, Bruker BioSpin did not submit any performance certificates and was awarded the contract.

This practice seems particularly suspicious in light of the fact that Mr. Usmani and Mr. Suri, two of the BEC members under tenders HSCC/PUR/CBP(F&D)/ICB-IA/2003 and HSCC/PUR/CBP(F&D)/ICB-1D, disqualified some bidders in other tenders for not submitting performance statements and/or performance certificates, apparently without seeking clarification, even though the BEC had

---

179 Ibid., sec. VIIA, 3(iv), p. 79.
180 BER, HSCC/PUR/CBP(F&D)/ICB-IA/2003, sec. on AAS, p. 52 (Feb. 19, 2004); Bid of GBC Scientific Equipment (Dec. 23, 2003); and Contract Award Agreement with GBC Scientific Equipment (Feb. 5, 2005).
181 BER, HSCC/PUR/CBP(F&D)/ICB-ID/2003, sec. on Nuclear Magnetic Resonance, pp. 9, 17–18, and 21 (Feb. 6, 2004); Bid of Bruker BioSpin (Jan. 6, 2004); and Contract Award Agreement with Bruker BioSpin (Nov. 4, 2004).
declared these bidders to be the lowest evaluated responsive bidders. At the same time, the BEC members sought clarification on post-qualification criteria from higher bidders and recommended the higher bidders for the contracts after they clarified their bid submissions.

**Procurement Officials Disqualified Some Bidders on Post-qualification Grounds Even Though It Appeared That the Bidders Met, or Could Have Met, the Post-qualification Criteria.** For example, in the procurement processes for four of the five items in tender HSCC/PUR/CBP(F&D)/NCB-1C/2003, a lower evaluated bidder, though technically and commercially responsive, was disqualified for not complying with the post-qualification criteria, and the BER instead recommended that Yorco Sales be awarded the contract for all four items. The contracts were approved by the MOHFW. The DIR’s review of the procurement documents in these cases suggests that the lower bidders did in fact meet, or could have met, the post-qualification criteria in each case.

For the first item, a sterilizer horizontal autoclave, the BER reported Yorco Sales and Enkay Enterprises to be technically and commercially responsive. HSCC then disqualified Enkay Enterprises, whose bid price was lower than that of Yorco Sales, for not meeting the post-qualification criteria. The BER reported that Enkay Enterprises had not complied with post-qualification parameter 1.a., requiring that the bidder prove that it had supplied at least 80 percent of the quantity in the last three years and that it had been in continuous business of manufacturing the specified products, as well as post-qualification parameter 3.iv., requiring that the bidder submit client certificates in support of the satisfactory supply of the equipment. The BER reported that procurement officials sought clarifications from Enkay Enterprises in confirmation whether the company could submit purchase orders.

---

182 See, e.g., BER, HSCC/PUR/CBP(F&D)/2005/ICB/A, sec. on AAS, pp. 3–4, 6, and 241–42 (Mar. 20, 2006) (disqualifying Thermo Electron Corporation Cambridge for not complying with post-qualification criteria and not seeking clarification from the company, even though the company was the lowest evaluated bidder and was deemed to meet all technical and commercial criteria); and BER, HSCC/PUR/CBP(F&D)/NCB-1C/2003, sec. on Sterilizer Horizontal Autoclave, pp. 3–4, 15–16, 19–20, and 139–40 (Oct. 4, 2004) (disqualifying Enkay Enterprises for not complying with post-qualification criteria even though the company was the lowest evaluated bidder and deemed to meet all technical and commercial criteria. In this case, the BEC claimed to have sought clarifications from the company but the company informed the DIR that this never happened).

183 See, e.g., BER, HSCC/PUR/CBP(F&D)/2005/ICB/A, sec. on AAS, pp. 3–4, 6, and 241–42 (Mar. 3, 2006) (seeking clarification on post-qualification criteria from Perkin Elmer India, whose bid was higher than that of disqualified Thermo Electron Corporation Cambridge, and recommending Perkin Elmer India for the contract after the company clarified its bid submission); and BER, HSCC/PUR/CBP(F&D)/NCB-1C/2003, sec. on Sterilizer Horizontal Autoclave, pp. 3–4, 8, 15–16, 19–20, and 139–40 (Oct. 4, 2004) (seeking clarification on post-qualification criteria from Yorco Sales, whose bid was higher than that of disqualified Enkay Enterprises, and recommending Yorco Sales for the contract after the company clarified its bid submission).


185 Ibid., p. 139.
and client certificates establishing its capacity to perform but that the company did not respond: “Order Copies & respective client certificates were asked from M/s Yorco Sales Pvt. Ltd., M/s Enkay Enterprises & M/s S.M. Scientific Instruments Pvt. Ltd, only M/s Yorco Sales Pvt. Ltd. responded.”

The DIR contacted the administrator of Enkay Enterprises, Mr. Varun Kumar, on August 14, 2007, to confirm if procurement officials indeed sought clarifications from the company. Mr. Kumar stated that HSCC never contacted the company for any clarification. Mr. Kumar further asserted that in his opinion HSCC generally made its decisions on the award of contracts first and then conformed its procurement analysis to those decisions.

The DIR reviewed Enkay Enterprises’ bid and found indicators that in fact the company did comply with post-qualification parameter 1.a. The company’s performance statement shows that it supplied 10 items on November 25, 2002, to Hitech Engineering Enterprises, an amount that exceeded the 80 percent threshold within the last three years. This information also demonstrates that the company was in the continuous business of manufacturing the specified product. With respect to post-qualification parameter 3.iv., Enkay Enterprises claims in its performance statement that had the company been asked to provide client certificates showing the satisfactory supply of the equipment, it could have done so for its sales to Hitech Engineering Enterprises.

Thus, procurement officials disqualified the lower bidder for the contract on questionable grounds regarding the post-qualification criteria, and procurement officials asserted that clarifications were sought from the disqualified bidder when the DIR’s research suggests that this was not the case.

In the same tender HSCC similarly disqualified another company, S. M. Scientific, on similar post-qualification grounds in the procurement of three other items, a hot air oven, an oven universal, and a vacuum oven with vacuum pump. In each case HSCC claimed that clarifications had been sought from the company and that the company did not respond to the requests. The DIR has not confirmed whether this assertion is accurate or not. As a result of the disqualifications,
the MOHFW awarded the contracts instead to Yorco Sales, a higher bidder, in all three cases.\textsuperscript{192}

In the case of the hot air oven, the DIR reviewed the bid submitted by the disqualified bidder S.M. Scientific,\textsuperscript{193} and the documents appear to contradict the BER's conclusion that the post-qualification criteria were not met. The company's performance statement shows that it supplied more than 80 percent of the quantity of the product in the previous three years—the required percentage in the bidding document to demonstrate capacity to perform.\textsuperscript{194} A review of the company's bid also suggests that HSCC could easily have confirmed that the information regarding prior sales in the company's performance statements was correct: the performance statements included the names and addresses of the company's clients and the order numbers and delivery dates for the sales.\textsuperscript{195} This information also demonstrates that the company was in the continuous business of manufacturing the specified product. Apparently, despite these facts HSCC did not choose to seek such clarification to determine whether the lower bidder complied with the procurement requirements. S. M. Scientific's deemed failure to fully comply with all post-qualification criteria is also unusual, given that the company had successfully bid on five other items in other tenders and was awarded the contracts.\textsuperscript{196}

Thus, HSCC's disqualification of two companies with lower bid prices than Yorco Sales on post-qualification grounds when the companies' bids could have been clarified calls into question the procurement process to favor Yorco Sales.

\textit{Procurement Officials Awarded Contracts to Some Bidders Even Though There Was a Substantial Lack of Thoroughness to Their Bid Packages.} For example, for the procurement of a dissolution apparatus with auto samplers in tender HSCC/PUR/CPB(F&D)/ICB-1B/2003, the BER recommended Electrolab, the lowest evaluated responsive bidder, for the contract, and the MOHFW awarded the contract to the company.\textsuperscript{197} The DIR reviewed the bid submitted by Electrolab, and the review shows that the documentation included in the company's bid is

\textsuperscript{192} Three Contract Award Agreements with Yorco Sales (Feb. 24, 2006).
\textsuperscript{193} The DIR was unable to review S.M. Scientific's Bids for Oven Universal and Vacuum Oven with Vacuum Pump because HSCC did not provide the DIR with copies of these documents.
\textsuperscript{194} S.M. Scientific Bid, Performance Statement, pp. 9–10 (Mar. 26, 2004).
\textsuperscript{195} Ibid.
\textsuperscript{196} Contract Award Agreements for S.M. Scientific for Autoclave Vertical (Jun. 24, 2005), Vacuum Oven with Vacuum Pump (Jun. 24, 2005); Double Distillation Water Plant with Conductivity Meter (Jun. 20, 2006); Laminar Flow with Chamber/Biological Safety Cabinet (Nov. 2, 2006); and Vacuum Oven with Vacuum Pump (Nov. 2, 2006).
\textsuperscript{197} BER, HSCC/PUR/CBP(F&D)/ICB-1B/2003, pp. 6 and 7–8 (Sep. 22, 2004); Contract Award Agreement for Electrolab (Feb. 13, 2006).
limited and lacks detail, compared with the bids that are regularly submitted in FDCBP procurement processes.\textsuperscript{198} For example, while bids usually include hundreds of pages,\textsuperscript{199} Electrolab’s bid was only 14 pages.\textsuperscript{200} Although the BER reports that the company was asked to furnish additional documents to supplement its bid,\textsuperscript{201} the DIR has seen no evidence that Electrolab has done so. This is a potential indicator of flaws in the procurement process.

\textbf{Procurement Officials Reached Findings as to Whether or Not a Bidder’s Item Met Required Specifications That Were Unsupported by the Bidder’s Underlying Documentation.} In some cases bidders were disqualified for not complying with specification requirements even though their specifications were in compliance, with the effect of favoring other bidders. For example, for the procurement of a high-pressure liquid chromatograph mass spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the lowest bidder, Shimadzu, was disqualified for technical non-compliance, even though the company claimed in its compliance statement to have satisfied all technical criteria and the DIR’s review reveals that the company was in compliance with at least two of the parameters that were found to be not met.\textsuperscript{202} Parameter 12 required the bidder’s product to include a workstation with “32 bit Windows NT based with built-in capability for auto start up and shut down, self diagnostic, auto tuning and peek [sic] monitoring facility.”\textsuperscript{203} The BER concluded that for this parameter Shimadzu did not provide any information showing that its product met this requirement.\textsuperscript{204} However, the DIR’s review of Shimadzu’s bid reveals that the company did in fact demonstrate that its product met these requirements.\textsuperscript{205} Parameter 23 required that the product’s column oven have an ambient range from –15 degrees Celsius to –60 degrees Celsius.\textsuperscript{206} The BER mistakenly reported that Shimadzu’s product had a range of 4–80 degrees Celsius when it was actually –15 degrees Celsius to –60 degrees Celsius.\textsuperscript{207} However, in Shimadzu’s compliance statement the bidder provided tech-

\textsuperscript{198} Bid of Electrolab (Apr. 3, 2004).
\textsuperscript{199} For example, see Bid of Perkin Elmer Instruments (Mar. 29, 2004), from the same tender.
\textsuperscript{200} Bid of Electrolab (Apr. 3, 2004).
\textsuperscript{201} BER, HSCC/PUR/CBP(F&D)/ICB-1B/2003, p. 4 (Sep. 22, 2004).
\textsuperscript{203} BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 259 (Feb. 19, 2004).
\textsuperscript{204} \textit{Ibid}.
\textsuperscript{206} BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 260 (Feb. 19, 2004).
nical information demonstrating that it did comply with all eight parameters. 208 Thus, the disqualification of Shimadzu, the lowest bidder, was questionable and merits attention.

In Some Cases, Procurement Officials Found a Bidder to Be Technically Responsive and Recommended It for the Contract and the MOHFW Endorsed the Finding and Awarded the Contract to the Company Even Though the Bidder Had Not Provided Supporting Information for Several Technical Parameters. For example, for the procurement of an ion chromatograph in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, Indtech Analytical, a higher bidder that did not comply with all technical criteria, was awarded the contract over the lowest bidder, Waters India, whose technical compliance was also unclear. The BER declared that only Indtech Analytical was technically and commercially responsive, recommending it for the contract, and declared Waters India to be non-responsive on two technical parameters. 209 However, the DIR's review of the BER's comparison statement on the technical evaluation of the bids reveals that Indtech Analytical had not provided any information for eight parameters and had provided information for five product specifications that did not meet their respective parameters. 210 The BER noted these many deviations but chose to ignore them in recommending Indtech Analytical for the contract.

In contrast to the 13 parameter deviations that the BER found for Indtech Analytical, the BER noted only two technical parameter deviations for Waters India, the lowest bidder. 211 Rather than seek clarifications from Waters India for these two parameters, the BER declared that Waters India was non-responsive. 212 The MOHFW endorsed the BER's recommendation to award the contract to Indtech Analytical. 213 Thus, Indtech Analytical, a higher bidder, appears to have been favored in the procurement process.

4. Seemingly Fraudulent Documents in the Procurement Process

The DIR's review of the documentation submitted by suppliers in the equipment procurement processes reveals seemingly fraudulent documents that formed

---

208 Bid of Shimadzu, pp. 9–15, and 27 (Jan. 15, 2004).
209 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 11–12, 50, and 57 (Feb. 19, 2004).
210 Ibid., pp. 351–54.
211 Ibid., pp. 41–2 and 351–54.
212 Ibid., pp. 11–12, 41–42, 57, and 351–54.
213 MOHFW letter to Bank, p. 2 (Jul. 21, 2004) (INT has not received copies of the Bids and thus was unable to verify the BER findings); Contract Award Agreement with Dionex Corporation (Nov. 12, 2004).
the basis of winning bids. In some cases, complaints corroborate the questionable nature of these documents.

Performance Certificates Submitted by Winning Bidders Appear to Be Forged. For example, in tender HSCC/PUR/CBP(F&D)/2005/ICB/A, Elico, the winning bidder, submitted a performance certificate issued by Uttaranchal Scientifics and Chemicals (Uttaranchal) as part of its bid.\(^{214}\) The owner of Uttaranchal later submitted a complaint to HSCC on June 3, 2006, alleging that the performance certificate submitted by Elico in Uttaranchal's name was "totally fraud and entirely fabricated."\(^{215}\) The owner further alleged that "there was not a single order on behalf of our company for spectrofluorimeter [sic] in our entire business with Elico."\(^{216}\) On November 13, 2006, Parveen Prakash, a representative of Marsha Enterprises, also submitted a complaint letter to HSCC alleging that Elico had provided false performance certificates, including one from Uttaranchal Scientifics and Chemicals.\(^{217}\) Given that Marsha Enterprises was not a bidder in this procurement, it is unclear why its representative submitted a complaint. In his complaint, Mr. Prakash alleged that Elico had submitted performance certificates from end users that were neither laboratories nor manufacturers of food and drug items.\(^{218}\)

On January 5, 2007, the MOHFW responded to Mr. Prakash, stating that Uttaranchal had confirmed in letters dated July 12 and September 7, 2006, that the company had indeed received equipment from Elico.\(^{219}\) The MOHFW also stated its belief that "the hand written letter dated 03.06.2006 from M/s Uttaranchal Scientific and Chemicals containing an opposite view to the above two separate letters is [sic] appeared to be malicious and unauthenticated."\(^{220}\) Thus, the MOHFW expressed disagreement with Mr. Prakash's complaint and alleged that it had received evidence contradicting Mr. Prakash's allegations.

The DIR's review of equipment procurement under the FDCBP reveals that Elico submitted performance certificates issued by Uttaranchal in two other tenders as well, one in 2003 and one in 2005.\(^{221}\) The DIR reviewed two of these three performance certificates allegedly provided by Uttaranchal and the complaint that

\(^{214}\) Bid of Elico, p. 139 (Apr. 20, 2004).
\(^{215}\) Uttaranchal letter to HSCC (Jun. 3, 2006).
\(^{216}\) Ibid.
\(^{217}\) Complaint letter of Parveen Prakash to HSCC (Nov. 13, 2006).
\(^{218}\) Ibid.
\(^{219}\) MOHFW letter to Parveen Prakash (Jan. 5, 2007).
\(^{220}\) Ibid.
Uttaranchal sent to HSCC. The review of the certificates shows that they contain suspicious features, such as varying signatures for Uttaranchal’s proprietor.\textsuperscript{222}

The DIR has not received or reviewed the July and September 2006 letters from Uttaranchal that the MOHFW purportedly received, allegedly confirming that the company received equipment from Elico. However, the DIR reviewed Elico’s bid in other tenders and found that many of the performance certificates submitted by the company appear to be fraudulent.\textsuperscript{223} Most of the Elico performance certificates in a later tender, purportedly from different companies, carried the exact same heading and were issued within five days of each other.\textsuperscript{224} Several certificates were issued on plain paper and have the same font and text.\textsuperscript{225} Given that Elico was awarded three equipment contracts under the FDCBP,\textsuperscript{226} it appears that procurement officials might have awarded contracts based on fraudulent documents submitted by the company.

The DIR also detected seemingly fraudulent performance certificates in the procurement of a UV-Vis spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-2/2004. In that procurement, the BER concluded that nine of the 11 bids were technically and commercially responsive and recommended the lowest evaluated responsive bidder, Systronics, for the contract.\textsuperscript{227} The MOHFW awarded the contract to Systronics.\textsuperscript{228} The DIR reviewed the performance certificates submitted by Systronics in its bid. At least eight of those certificates were handwritten and contained similar styles of handwriting, indicating that they may have been prepared by the same one or two people even though they purportedly came from different companies.\textsuperscript{229} Some of the handwritten certificates do not have dates, and others are dated in the same month, January 2005.\textsuperscript{230} These factors indicate that at least some of the performance certificates may have been fabricated. Three examples are provided in Figure 4.

\textsuperscript{222} Ibid.
\textsuperscript{224} Bid of Elico, IFB No. HSCC/PUR/CBP(F&D)/2004/NCB/3 (Nov. 11, 2004).
\textsuperscript{225} Ibid.
\textsuperscript{226} Elico Contract Award Agreement for Flame Photometer (May 14, 2006); Elico Contract Award Agreement for pH Meter (May 14, 2006); and Elico Contract Award Agreement for Spectrophotoflourimeter (Jan. 12, 2007) (found in consignee list provided by HSCC).
\textsuperscript{227} BER, HSCC/PUR/CBP(F&D)/ICB-2/2004, pp. 8–10 (undated).
\textsuperscript{228} Contract Award Agreement with Systronics (May 15, 2006).
\textsuperscript{230} Ibid.
Figure 4. Examples of Seemingly Fraudulent Performance Certificates from Systronics

**Example 1**

**Example 2**

**Example 3**
Chemito Technologies also submitted multiple performance certificates, purportedly from different companies, in its bid for the UV-Vis spectrophotometer procurement, most of which use similar wording. The certificates in question have no company letterhead, mention no dates, carry the same font and text, were issued on plain paper, and have unreadable signature blocks that make it difficult to determine who signed them. Three examples are provided in Figure 5.

**Figure 5. Examples of Seemingly Fraudulent Performance Certificates from Chemito Technologies, UV-Vis Spectrophotometer**

Although Chemito Technologies was not awarded the contract for this item, the company was awarded contracts for items in other FDCBP tenders. For example, the company was awarded a contract for gas generators worth approximately USD 0.3 million, despite questionable certificates. For that contract, Chemito

---

232 Ibid.
233 Chemito Technologies Contract Award Agreement for Gas Generators for H2, N2 & Zero Air (Jun. 8, 2005); and Chemito Technologies Contract Award Agreement for HPLC System (Gradient) (Jun. 15, 2006).
Technologies submitted nine performance certificates, purportedly from different companies, most of which appear questionable, with no company letterhead, no dates, the same font and text, plain paper, and unreadable signatures (Figure 6).235

**Figure 6. Examples of Seemingly Fraudulent Performance Certificates from Chemito Technologies, Gas Generators**

![Examples 1, 2, and 3 of seemingly fraudulent performance certificates](image)

The questionable nature of Chemito Technologies’ performance certificates is further underscored when compared with the performance certificates that the company submitted for two other items, a gas liquid chromatograph and an HPLC system (gradient), in a 2005 tender.236 Unlike the questionable performance certificates that the company produced, the performance certificates for these other items appear more authentic. They include dates, are written on company letterhead, include evidence of being faxed, provide company addresses and telephone numbers, and have unique signatures.237 Based on a review of Chemito’s documentation, indicators of fraud exist in some of these procurement processes.

237 Ibid., pp. 47–53, 74–89.
Documentation that had been found to be fraudulent also appeared in the procurement of air conditioners in a 2005 tender. In that procurement, the MOHFW awarded the contract to Videocon International despite the fact that HSCC had found the company’s similar performance certificates to be fraudulent in an early tender.238

Videocon International had submitted a bid for the same item in 2003.239 In the 2003 tender, the company included in its bid a performance certificate claiming that 308 air conditioners had been supplied to U. P. Health Systems Development Project, Lucknow (UPHSDP).240 HSCC forwarded a copy of the performance certificate to UPHSDP to confirm that the sale occurred.241 UPHSDP responded that the performance certificate submitted by Videocon International from UPHSDP had never been issued by the agency and that the signature on the performance certificate was not from anyone working in its office.242 Based on this information, the BER in the 2003 tender did not recommend the award of contract to Videocon International, which would otherwise have won the contract.243

In the 2005 tender, Videocon International once again submitted a performance certificate reflecting that it had supplied 308 air conditioners to UPHSDP and listed the same information in its performance statement as it had listed in the 2003 tender.244 The DIR compared the UPHSDP performance certificate that was submitted in the 2003 tender with the UPHSDP performance certificate that was submitted in the 2005 tender and determined that the two certificates appear mostly identical.245 They differ only in that (1) the date in the 2003 certificate is typed while the same date in the certificate of the 2005 tender is handwritten, and (2) the 2003 certificate has no annex while the certificate in the 2005 tender includes an annex listing the quantity and price of the goods allegedly provided.246 One individual, Mr. S. A. Usmani, was a BEC member in both tenders. Unlike in the 2003 tender, HSCC did not seek any clarification in the 2005 tender, and

239 BER, HSCC/PUR/CBP(F&D)/NCB-OE1A/2003, pp. 5–6 (Dec. 15, 2003).
242 Ibid., p. 75.
246 Ibid.
the MOHFW awarded the contract to Videocon International.\textsuperscript{247} The fact that the contract was awarded based on a performance certificate whose similar version had been declared fraudulent by at least one of the same BEC members in an earlier tender is an indicator of fraud and corruption in the equipment procurement process.

\textit{Specifications Claimed by Winning Bidders Appear to Be Fraudulent.} In one tender, a bidder was awarded a contract even though its specification claims appear to be fraudulent. In the procurement of a UV-Vis spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-2/2004, Systronics claimed that its item’s specifications matched exactly the tender’s required specifications.\textsuperscript{248} The BER concluded that nine of the 11 bids were technically and commercially responsive and recommended Systronics, the lowest evaluated responsive bidder, for the contract.\textsuperscript{249} The MOHFW awarded the contract to Systronics.\textsuperscript{250} The DIR reviewed Systronics’ bid and cross-checked the company’s technical specifications against the tender specifications.\textsuperscript{251} The DIR found the documents to be almost identical. For example, both documents list a specific wavelength range of “190–900nm, at least”; a wavelength accuracy of “+/– 0.5 or better”; and a photometric accuracy of “+/– 0.001 Abs in range 0 to 0.5 or 0 to 200.0 percent T.”\textsuperscript{252} A copy of the company’s bid specifications and the tender specifications is provided in Figure 7 for comparison, showing the unusually identical nature of the two lists.


\textsuperscript{249} BER, HSCC/PUR/CBP(F&D)/ICB-2/2004, pp. 8–10 (undated).

\textsuperscript{250} Contract Award Agreement with Systronics (May 15, 2006).


\textsuperscript{252} \textit{Ibid.}
Figure 7. Comparison of Required Tender Specifications with the Compliance Statement of Systronics

### Required Tender Specifications

<table>
<thead>
<tr>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV-VIS Spectrophotometer</td>
</tr>
</tbody>
</table>

- The equipment shall be used for identification and quantification of drugs and pharmaceuticals
- Full integrated PC based double beam, direct ratio recording, UV Visible Spectrophotometer with the following specifications:
  - Wavelength range: 190-900nm, at least
  - Wavelength stability Reproducibility: ±0.3nm
  - Spectral Bandwidth: <1nm
  - Multiple Cell Holder: To hold 2 cells
  - Photometric Accuracy: ±0.001 Abs in range 0 to 0.5 or 0 to 200.0%T
  - Photometric Noise: <0.0002 Abs RMS at 1 Abs, 500nm
  - Photometric linearity: Better than 1% at 3 absorbance
  - Stability, Photometric Drift: <0.0003%/hr at 340nm
  - Scanning speed: Selectable over the range, 5 to 700nm/minute
- The system should comply with GLOP requirements like Performance Validation, Software performance certificate, password control, and system logbook.
- The software should have at standard features like base line recording, wavelength/time scans, repeated wavelength scan and concentration calculation.

### Compliance Statement Submitted by Systronics

<table>
<thead>
<tr>
<th>Offered Specification SYSTRONICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-5204 Full Integrated PC Based double beam, direct ratio recording, UV Visible Spectrophotometer</td>
</tr>
</tbody>
</table>

- Wavelength range: 190-900nm
- Wavelength stability Reproducibility: 0.1nm increment
- Wavelength Accuracy: ±0.3 or better
- Wavelength repeatability: ±0.3nm
- Spectral Bandwidth: <1nm
- Multiple Cell Holder: To hold 2 cells
- Photometric Accuracy: ±0.001 Abs in range 0 to 0.5 or 0 to 200.0%T
- Photometric Noise: <0.0002 Abs RMS at 1 Abs, 500nm
- Photometric linearity: Better than 1% at 3 absorbance
- Stray light: <0.005%T at 220 nm and 0.009%T at 340nm
- Stability, Photometric Drift: <0.0003%/hr at 340nm
- Scanning Speed: Selectable over the range, 5 to 700nm/minute

**Accessories:**

1. Two pairs Quartz cells of 10mm and another 50mm may also be included.
2. Two pairs of glass cells 10mm

Unlike in earlier findings where it appeared that procurement officials had copied specifications from a company's leaflet, in this case it appears that Systronics copied the technical specifications from the tender document and submitted the same in its bid, since the company has no accompanying literature that supports the specifications. It is unclear whether the BEC members sought any clarification from Systronics on its technical specifications before declaring the company technically responsive. Such unlikely identical specifications, without accompanying literature to confirm the specifications, indicate the potential for corruption in the procurement process.
C. Disqualification of Lower Cost Bidders

Not only did the DIR detect indicators of fraud and corruption in the equipment procurement process that resulted in preferential treatment of some bidders, but the preferential treatment also often led to the disqualification of lower cost bidders, resulting in significantly higher cost contracts for the equipment. Some examples of the higher cost contracts are provided below.

When the steering committee overruled the BER’s recommendation to award the contract for an HPLC to Perkin Elmer Instruments in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003 and recommended instead the awarding of the contract to Waters India, the MOHFW accepted the steering committee’s recommendation and paid approximately USD 30,000 more for the contract than it would have paid to Perkin Elmer Instruments. 253

For the procurement of an HPLC (isocratic system) with 10 columns, two integrators, and one degasser, in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the steering committee overruled the BER’s recommendation by recommending Waters India over Indtech Analytical, seeking clarifications from Waters India and not from Indtech Analytical, though both were substantially responsive. 254 Had Indtech Analytical been allowed to clarify its bid and successfully done so, it most likely would have been awarded the contract, saving approximately USD 30,000.

For the procurement of a spectrophotofluorometer in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the DIR has seen no evidence that the contract has yet been awarded, but the procurement evaluation process has already occurred. In that process, the steering committee overruled the BER’s findings. 255 The BER had found that the technical specifications of the lower bidder, Elico, were substantially responsive, but the steering committee concluded that Elico was technically non-responsive and recommended Hitachi, a higher bidder, for the contract. 256 If the contract is awarded to Hitachi instead of Elico, the MOHFW will pay approximately USD 212,000 more for the contract than if Elico is awarded the contract.

For the procurement of a gas chromatograph mass spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-2/2004, the DIR has seen no evidence that the

253 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 1, 9–10, 49, and 55 (Feb. 19, 2004); steering committee minutes, sec. on HPLC (undated).
254 BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 9–10, 49, and 55 (Feb. 19, 2004); Steering committee minutes, sec. on HPLC Isocratic System (undated).
255 HSCC/PUR/CBP(F&D)/ICB/1A/2003, pp. 12, 42–43, 51, 58, and 365 (Feb. 19, 2004); Steering committee minutes, sec. on Spectrophotofluorimeter (undated).
256 Ibid.
contract for the item has yet been awarded. However, the procurement process has occurred.257 The DIR’s review of the procurement process reveals that Perkin Elmer India was favored. The lowest bidder, Varian India, was found to be technically non-responsive based on information in the company’s catalogue, despite the fact that Varian India claimed in its bid to be in compliance with the required technical parameters.258 The reliance of the BEC members on Varian India’s catalogue alone and the decision of the BEC members not to seek clarification from the company are inconsistent with the actions of the BEC members in other tenders.259 Had HSCC sought clarification and had Varian India successfully clarified its bid, the MOHFW would have been in a position to save about USD 60,000.

Finally, in four of the five items in tender HSCC/PUR/CBP(F&D)/NCB-1C/2003, a lower evaluated bidder, though deemed by the BEC members to be technically and commercially responsive, was disqualified for not complying with the post-qualification criteria on questionable grounds.260 All four contracts were instead awarded to Yorco Sales.261 By awarding the contracts to the lower bidders, the MOHFW would have saved a total of about USD 24,000.

**Equipment Implementation**

The DIR evaluated the implementation of equipment under the FDCBP by making onsite visits to inspect 15 laboratories, reviewing relevant consignee lists, and speaking to laboratory personnel. In its review, the DIR detected a high amount of implementation shortcomings with respect to delivery, installation, use, and maintenance of equipment under the project.

The types of equipment implementation deficiencies detected by the DIR varied widely: some equipment had not been delivered, had been delivered late, had not been installed, had been installed improperly, had been delivered in damaged condition, or had been oversupplied. In addition, some suppliers did not provide...
the required operational training and demonstrations or meet warranty commitments to repair broken or damaged equipment.

**A. General Equipment Implementation Deficiencies**

The DIR has generated overview data showing the extensive nature of the FDCBP equipment implementation deficiencies at the 15 laboratories visited. The DIR bases its demonstrative data on such findings as non-delivery, non-installation, and warranty and maintenance issues. For example, the DIR found that at the time of the DIR’s March–April 2007 laboratory visits, more than half the equipment procured for the laboratories had not been delivered or installed, even though the majority of contracts had been awarded two to three years earlier. Sixteen contractors were responsible for the equipment that had not been delivered. Twelve contractors were responsible for the equipment that had not been installed. Laboratory officials informed the DIR that due to such implementation deficiencies they were often unable to meet their testing obligations.

Of the 282 pieces of equipment procured under the FDCBP for the laboratories that the DIR visited, 69 had not been delivered (24 percent) and 75 had been delivered but not installed (27 percent). Table 1 and Figure 8 provide an overview of this equipment and a breakdown of the equipment by location.

**Table 1. Overview of Implementation Status at Laboratories Visited**

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Equipment to Be Delivered</th>
<th>Value (USD)</th>
<th>Equipment Not Delivered</th>
<th>Affected Value (USD)</th>
<th>Equipment Delivered but Not Installed</th>
<th>Affected Value (USD)</th>
<th>Equipment Not Delivered or Delivered but Not Installed (Percent in pieces of equipment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FDL Mumbai</td>
<td>5</td>
<td>2,122</td>
<td>5</td>
<td>2,122</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>CFL Mysore</td>
<td>6</td>
<td>288,711</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>CIPL Ghaziabad</td>
<td>8</td>
<td>185,406</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>50,398</td>
</tr>
<tr>
<td>4</td>
<td>SDL Bangalore</td>
<td>4</td>
<td>43,295</td>
<td>1</td>
<td>12,506</td>
<td>2</td>
<td>4,333</td>
</tr>
<tr>
<td>5</td>
<td>FDTL Lucknow</td>
<td>51</td>
<td>159,067</td>
<td>9</td>
<td>22,972</td>
<td>12</td>
<td>27,378</td>
</tr>
<tr>
<td>6</td>
<td>SFDL Raipur</td>
<td>13</td>
<td>21,352</td>
<td>12</td>
<td>19,286</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>FRSL Ghaziabad</td>
<td>5</td>
<td>159,291</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>155,602</td>
</tr>
<tr>
<td>8</td>
<td>PHL Meerut</td>
<td>29</td>
<td>168,785</td>
<td>7</td>
<td>45,158</td>
<td>11</td>
<td>69,185</td>
</tr>
</tbody>
</table>

*continued*
Equipment delivery and installation deficiencies occurred with respect to 35 percent (nine percent not delivered and 26 percent not installed) of the equipment procured (by value) for the laboratories that the DIR visited (Figure 9).

### Figure 8. Equipment Delivery and Installation Problems at Laboratories Visited, Based on Pieces of Equipment

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Equipment to Be Delivered</th>
<th>Value (USD)</th>
<th>Equipment Not Delivered</th>
<th>Affected Value (USD)</th>
<th>Equipment Delivered but Not Installed</th>
<th>Affected Value (USD)</th>
<th>Equipment Not Delivered or Delivered but Not Installed (Percent in pieces of equipment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 PHL Thane</td>
<td>34</td>
<td>128,630</td>
<td>5</td>
<td>7,260</td>
<td>6</td>
<td>5,811</td>
<td>32</td>
</tr>
<tr>
<td>10 PHL Bangalore</td>
<td>24</td>
<td>106,346</td>
<td>4</td>
<td>2,015</td>
<td>9</td>
<td>28,110</td>
<td>54</td>
</tr>
<tr>
<td>11 PHL Bhubaneswar</td>
<td>29</td>
<td>70,061</td>
<td>8</td>
<td>8,055</td>
<td>16</td>
<td>19,765</td>
<td>83</td>
</tr>
<tr>
<td>12 SDCL Aurangabad</td>
<td>9</td>
<td>140,480</td>
<td>1</td>
<td>12,506</td>
<td>1</td>
<td>25,074</td>
<td>22</td>
</tr>
<tr>
<td>13 SDCL Mumbai</td>
<td>21</td>
<td>123,376</td>
<td>7</td>
<td>5,517</td>
<td>1</td>
<td>818</td>
<td>38</td>
</tr>
<tr>
<td>14 SDTRL Bhubaneswar</td>
<td>32</td>
<td>133,514</td>
<td>8</td>
<td>20,717</td>
<td>10</td>
<td>64,983</td>
<td>56</td>
</tr>
<tr>
<td>15 PHL Pune</td>
<td>12</td>
<td>37,047</td>
<td>2</td>
<td>2,167</td>
<td>2</td>
<td>5,088</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>1,767,483</strong></td>
<td><strong>69</strong></td>
<td><strong>160,281</strong></td>
<td><strong>75</strong></td>
<td><strong>456,545</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>

Note: Data cover 282 pieces of equipment.
Whether based on the number of pieces of equipment procured or on the value of equipment procured, the proportion of equipment affected by either non-delivery or non-installation at the laboratories that the DIR visited is significant.

1. Problems with Other Equipment Procured under the FDCBP for Which the DIR Has Received No Documentation

While inspecting the laboratories in those states that the MOHFW allowed the DIR to visit, the DIR discovered that the MOHFW had procured other equipment under the FDCBP for which the DIR has not received any procurement documentation from HSCC. The DIR learned that the MOHFW procured 21 additional pieces of equipment through 13 additional contracts. The DIR analyzed the implementation deficiencies related to these 21 pieces of equipment. Table 2 and Figure 10 demonstrate that delivery and installation problems affected 90 percent of these 21 pieces of equipment. The DIR was not provided documentation that would allow it to ascertain the values of these contracts.

Figure 9. Equipment Delivery and Installation Problems at Laboratories Visited, Based on Value

Note: The total value of equipment in the data is USD 1.78 million.
Table 2. Delivery and Installation Problems for 21 Pieces of Equipment for Which the DIR Was Not Provided Documentation

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Equipment to Be Delivered</th>
<th>Equipment Not Delivered</th>
<th>Equipment Delivered but Not Installed</th>
<th>Equipment Not Delivered or Delivered but Not Installed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SFDL Mumbai</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>2 SDL Bangalore</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>83</td>
</tr>
<tr>
<td>3 SFDL Raipur</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>86</td>
</tr>
<tr>
<td>4 CIPL Ghaziabad</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>17</td>
<td>2</td>
<td>90</td>
</tr>
</tbody>
</table>

Note: The DIR discovered that HSCC had procured these 21 additional pieces of equipment only after the DIR made its site visits and reviewed the consignees list. HSCC had not provided the DIR with any documentation for the procurement of this equipment. The implementation problem rate for this equipment was higher (90 percent) than the corresponding rate for equipment for which the DIR received documentation (51 percent). The DIR was not provided documentation that would allow it to ascertain the values of these contracts.

Figure 10. Delivery and Installation Problems for 13 Contracts for Which the DIR Was Not Provided Documentation
Table 1 reflects the fact that delivery and installation problems existed at 14 of the 15 sites visited. The one site where the DIR did not detect delivery and installation problems, CFL Mysore, experienced another implementation problem: some equipment was delivered to the CFL Mysore laboratory one year late with missing parts. Thus, the DIR detected some degree of deficiency in equipment implementation at every laboratory that it visited. Specific types of deficiencies, in addition to non-delivery and non-installation, are described below.

2. Oversupply

Eight of the 15 laboratories reported problems with oversupply of equipment under the FDCBP. During the DIR’s site inspections, laboratory officials informed the DIR that the MOHFW and HSCC did not consult their laboratories before procuring laboratory equipment. Four laboratories, CIPL Ghaziabad, PHL Meerut, CFL Mysore, and PHL Bangalore, reported that without consultation the MOHFW decided on its own what equipment to procure for them.

One result of this lack of coordination was that many laboratories received equipment that had limited or no use because of staffing shortages, deficiencies in staff expertise, lack of available space, and/or lack of required work product given the testing requirements of each laboratory. For example, the Assistant Director of PHL Meerut informed the DIR that over his objection, 27 pieces of equipment were delivered to the laboratory. The Assistant Director said that when the equipment arrived, he initially refused to take possession of it but relented after receiving pressure from senior food and drug officers at FDTL Lucknow. Similarly, the Superintendent of SDL Bangalore stated that Perkin Elmer Instruments had delivered a gas chromatograph worth USD 22,855 that was not in use because the laboratory had already procured one with state funds.

In its site visits, the DIR often found extra equipment lying unpacked in storage, sometimes in unsanitary conditions. For example, at PHL Meerut, 12 machines, collectively worth USD 70,549, remained packed and stored in conditions that were likely to lead to damage given the extreme humidity within the store room. A senior analyst at PHL Bhubaneswar informed the DIR that the laboratory had received nine pieces of equipment, worth USD 15,493, for which the laboratory had no use. This equipment was also still packed in storage unused.

3. Lack of Demonstration and Training in Use of Equipment

The contract agreements for the supply of laboratory equipment incorporate, by reference to provisions in the tender documents, an obligation for the con-
tractor to install and demonstrate proper use of the equipment to the laboratory
staff.262

During visits to the laboratories, the DIR found that much of the equipment
was not being used as intended. Analysts in five laboratories stated that they had
not received proper demonstrations on how to operate the equipment or training
on testing samples at the time of installation. For example, at FDTL Lucknow, the
staff informed the DIR that Orbit Technologies supplied a digital polarimeter to
the laboratory and that Yorco Sales supplied two units of a disintegration apparatus
to the laboratory but that the companies provided no demonstration or training.
The staff added that a chemist was needed to teach how to test samples with this
sophisticated equipment and that such a person was not available. The Director of
PHL Bangalore stated that the analysts in her laboratory frequently complained to
her that they faced difficulties in testing samples because the equipment was diffi-
cult to understand. In some laboratories, analysts refused to switch on the equip-
ment for the DIR, explaining that they did not know how to operate it. In other
laboratories, such as PHL Thane, when the DIR requested that the analysts give a
demonstration, the analysts tried but could not. Many analysts stated that because
they were often not properly trained, there was a possibility that the results of the
sample testing could be incorrect.

4. Problems with Warranty and Maintenance Commitments

The DIR detected deficiencies regarding the warranty and annual maintenance
commitments made by companies in their equipment supply contracts. Based on
discussions with laboratory staff, the DIR concluded that most staff were unaware
that contract agreements required suppliers to provide free maintenance services
during a warranty period. In cases where laboratory staff had attempted to exercise
the warranty, suppliers often had not repaired the equipment.

For example, the MOHFW awarded Yorco Sales a contract on May 11, 2006, to
supply 18 rotary vacuum evaporators under the FDCBP.263 The company delivered
two units to PHL Thane, but the laboratory staff informed the DIR that they could
not use the equipment because the company did not supply all the required parts.
Despite several requests from the laboratory staff, Yorco Sales still had not deliv-
ered the missing parts.

262 All HSCC tender documents, under General Conditions of Contract (GCC) clause 13, state that contractors
shall provide “training of the Purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up,
operation, maintenance, and/or repair of the supplied Goods.”

263 Contract Award Agreement with Yorco Sales (May 11, 2006).
The MOHFW awarded S. M. Scientific Instruments a contract on May 30, 2006, to supply five double distillation water plants with conductivity meters. The company delivered two units to SDL Bangalore, and one of the units was damaged during shipment. The laboratory staff informed the DIR that they had requested that S. M. Scientific Instruments replace the damaged unit but received no response from the company.

The MOHFW awarded Elico a contract on May 14, 2006, to supply 17 flame photometers. The company delivered two units to FDTL Lucknow, and the laboratory staff reported that both units were installed incorrectly and were giving incorrect readings. Despite the laboratory's several requests, Elico had not yet replaced or fixed the equipment.

B. Specific Equipment Implementation Deficiencies Corresponding to Equipment Contracts Reviewed

In its visits to 15 laboratories, the DIR detected implementation deficiencies that correspond to specific contracts that the DIR examined in its equipment procurement review. Out of the 29 contracts for which the DIR found possible fraud or corruption, 20 of the contracts (69 percent) had corresponding implementation problems. The DIR recognizes that only a full investigation can establish a causal link between the procurement issues and implementation shortcomings identified for these contracts. Nonetheless, the high proportion of contracts with indicators of favored bidders that experienced corresponding deficiencies in implementation suggests a possible correlation. In the DIR's experience, flawed procurement processes often lead to the selection of bidders that are ill-equipped to perform the contracts awarded. Examples of possible instances are provided below.

1. Implementation Problems Occurred with Respect to Suppliers Whose Compliance with Post-qualification Criteria in the Procurement Process Was Questionable

The DIR detected implementation deficiencies linked to the procurement of an AAS in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003. In that procurement, the MOHFW awarded the contract to GBC Scientific Equipment, despite indicators that the supplier did not meet post-qualification criteria and complaints corroborating...
rating this finding.267 Under the contract agreement, the company was required to deliver the equipment within four months of the February 8, 2005, contract date.268 However, the company did not deliver and install the equipment for PHL Thane until November 10, 2005—more than nine months after the agreement. In addition, PHL Thane informed the DIR that the AAS equipment arrived with damaged graphite tubes. The laboratory stated that the tubes were necessary to operate the machine and that, given this damage, the equipment was of limited use. PHL Meerut informed the DIR that GBC Scientific Equipment delivered the AAS equipment on July 14, 2005, but that as of the DIR’s March 16, 2007, visit, the equipment had not yet been installed. Similarly, the SDTRL Bhubaneswar informed the DIR that GBC Scientific Equipment had not yet installed the AAS equipment in its laboratory. In these two cases, the equipment remained unpacked in storage.

Implementation deficiencies were also connected to the procurement of a UV-Vis spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-2/2004, where Systronics, the winning bidder, had established post-qualification criteria by submitting performance certificates that seemed fraudulent.269 The DIR’s review revealed implementation deficiencies connected to this procurement. For example, FDTL Lucknow reported that Systronics delivered the equipment on October 27, 2006, but that the equipment malfunctioned during the installation and demonstration provided by the company’s engineer. Although the company promised to fix the defect, it had not done so as of the DIR’s visit on March 20, 2007. According to the laboratory, this equipment is critical to its operations. Systronics failed to install the UV-Vis spectrophotometer at CIPL Ghaziabad despite the laboratory’s several written requests for the company to do so. The DIR found the equipment still packed in storage. Another laboratory that the DIR visited, SDTRL Bhubaneswar, reported that the equipment was delivered and installed almost six months after the contract date and that the equipment had malfunctioned and was not in use. The laboratory stated that Systronics had not responded to multiple requests to repair the equipment, despite the fact that the warranty period in the contract agreement was still active.

267 Compare BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 52 (Feb. 19, 2004) with Steering committee minutes, sec. on AAS (undated); Thermo Electron Corp. letter to the MOHFW (Jul. 26, 2004).
268 Contract Award Agreement with GBC Scientific Equipment (Feb. 8, 2005).
2. Some Companies Whose Products’ Parameter Specifications Were Unusually Identical to the Tender Document Specifications Also Were Deficient in Implementing Their Contracts

In the procurement of UV-Vis spectrophotometer in tender HSCC/PUR/CBP(F&D)/ICB-2/2004, a comparison of the bid of Systronics, the winning bidder, with the specifications required by the tender reveals that the two sets of specifications were almost identical. This unusual finding and the fact that Systronics did not submit supporting literature for its equipment specifications suggest that the specifications listed in its bid were simply copied from the tender document and did not represent the company’s actual product.\(^{270}\) As described above, the company exhibited numerous deficiencies in supplying the equipment under the contract: the company delivered some defective equipment under the contract, and the company did not repair some of the equipment pursuant to the warranty terms. Such types of implementation issues suggest that possibly the actual specifications of Systronics’ product, if different from those reported in the company’s bid submission, were not sufficient to meet laboratory demands.

Similarly, the DIR detected implementation problems connected to the procurement of a rotary vacuum evaporator in tender HSCC/PUR/CBP(F&D)/ICB-2/2004. The DIR found indicators that HSCC had narrowly drafted the required item specifications to specifically match those of York Scientific Industries’ product. The tender document contained technical specifications that suspiciously were almost identical to those listed in the company’s product leaflet.\(^{271}\) Although HSCC awarded the contract to York Scientific Industries on December 29, 2005, the company had not supplied or installed the equipment at several laboratories as of the DIR’s visit on March 20, 2007.\(^{272}\) For example, FDTL Lucknow reported that the company had not delivered a unit of this item, though the contract obliged the company to do so within four months of the December 2005 contract. As of the DIR’s visit on April 3, 2007, to SDTRL Bhubaneswar, York Scientific Industries had not delivered the equipment to that laboratory, despite the same contractual obligation. The company delivered the equipment to PHL Pune on January 12, 2007. But despite the laboratory’s repeated requests, the company did not install the equipment.


\(^{272}\) York Scientific Industries Contract Award Agreement (Dec. 29, 2005).
3. The DIR Detected Implementation Problems Corresponding to the Procurement Processes Where the Steering Committee Made Questionable Findings in Overruling the BER and Recommending Another Bidder for the Contract

The DIR found numerous delivery and installation problems in CEM Corporation’s supply of microwave digestion units. As discussed, in the procurement of this equipment in tender HSCC/PUR/CBP(F&D)/ICB-1D/2003, the BER declared the company to be technically non-responsive,\(^ {273}\) and the steering committee reversed this decision.\(^ {274}\) The MOHFW awarded the contract to CEM Corporation.\(^ {275}\) For example, despite CEM Corporation’s contractual obligation to deliver two microwave digestion units to PHL Meerut within four months of the contract of July 26, 2004, the company delivered only one unit approximately 10 months after the contract. The company did not install the unit until approximately six months after that and even then installed the equipment in a location that had no electrical outlet. Thus, as of the DIR’s visit of March 16, 2007, the equipment was still not in use. As of the DIR’s visit, the company had not yet delivered the second unit, approximately two and a half years after the contract required delivery. The DIR also found that at FDTL Lucknow, CEM Corporation did not deliver the microwave digestion unit until February 24, 2005, almost seven months after the contract date of July 26, 2004. The company did not install the unit until September 6, 2005, approximately seven months after delivery. Moreover, CEM Corporation installed the unit in a temporary location due to ongoing construction work at the site. The laboratory reported that after the construction had been completed, CEM Corporation has ignored its repeated requests to move and install the unit at a permanent location. The DIR found similar delivery and installation delays with respect to CEM Corporation at PHL Bangalore and PHL Bhubaneswar.

The DIR also identified questionable findings by the steering committee in overruling the BER in the procurement of an HPLC isocratic system with 10 columns, two integrators, and one degasser in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003. As described earlier, though the BER had found both Waters India and Indtech Analytical to be responsive, the steering committee noted that the bids of both companies had minor deficiencies and sought clarifications only from Waters

\(^{273}\) BER, HSCC/PUR/CBP(F&D)/ICB-1D/2003, pp. 3–5, and 15–16 (Feb. 6, 2004).

\(^{274}\) Steering committee minutes, pp. 3–4 (Feb. 24, 2004).

\(^{275}\) Contract Award Agreement with CEM Corporation (Jul. 26, 2004).
India, the higher bidder.\textsuperscript{276} The DIR discovered implementation deficiencies linked to this procurement at the laboratories it visited. One laboratory, SDCL Mumbai, reported that Waters India delivered an HPLC isocratic system that had no column heater. Without this part, the laboratory was unable to use the equipment. As of the DIR’s site visit on March 26, 2007, the company had not yet delivered the missing part, despite the laboratory’s request.

4. **Yorco Sales Was Remiss in Fulfilling Contracts It Won through Procurement Processes That the DIR Found to Be Tainted**

As described earlier, for the procurements of a sterilizer horizontal autoclave, a hot air oven, an oven universal, and a vacuum oven with vacuum pump in tender HSCC/PUR/CBP(F&D)/NCB-1C/2003, a lower evaluated bidder, though technically and commercially responsive, was disqualified on a questionable basis for not complying with the post-qualification criteria. Yorco Sales was instead awarded the contract in each case.\textsuperscript{277}

The DIR detected implementation deficiencies connected to these four procurements. For example, though Yorco Sales delivered a sterilizer horizontal autoclave to FDTL Lucknow on May 17, 2006, the company had not yet installed the equipment as of the DIR’s visit on March 20, 2007. The equipment was still packed and waiting in storage. The laboratory also reported that in addition to this item, Yorco Sales supplied it with seven other pieces of equipment, but rather than send an engineer to install the equipment, the company sent an electrician. The laboratory staff explained that the electrician had no knowledge of the equipment’s operating procedures and was unable to provide any training or demonstration of the equipment, as was required in the contract agreement. The laboratory also noted that other equipment supplied and installed by Yorco Sales was not working properly. The laboratory has made repeated requests to Yorco Sales to remedy these problems, but the company has not yet done so. Five pieces of equipment from Yorco Sales remained packed in storage. The staff at SDTRL Bhubaneswar made similar reports with respect to Yorco Sales’ deliveries to their laboratory.

Other laboratories reported implementation problems with the hot air oven. PHL Meerut and PHL Bangalore reported that Yorco Sales delivered several units of the equipment on April 7, 2006, and on June 12, 2006, respectively, but that it still has not installed the equipment. In these cases, the DIR found that the units

\textsuperscript{276} BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 49 and 282–84 (Feb. 19, 2004); Steering committee minutes, sec. on HPLC Isocratic System (undated).

\textsuperscript{277} BER, HSCC/PUR/CBP(F&D)/NCB-1C/2003 (Oct. 4, 2004); Three Contract Award Agreements with Yorco Sales (Feb. 24, 2006).
were still packed and stored in their boxes. PHL Bangalore added that the equipment delivered by the company was damaged. Although PHL Bangalore repeatedly submitted requests to Yorco Sales over a nine-month period to replace the damaged units and although the units were still under warranty, the company had not done so as of the DIR's visit on April 10, 2007. The DIR's inspection of the equipment suggests that poor packaging was the reason for the damage.

The DIR's site visits also reveal implementation deficiencies connected to the procurement of the oven universal. Yorco Sales delivered the oven universal to FDTL Lucknow, but the equipment had not yet been installed as of the DIR's visit on March 20, 2007.278 The equipment was still packed and waiting in storage. The laboratory informed the DIR that despite its repeated requests, the company had not yet installed the equipment. PHL Bangalore reported that Yorco Sales delivered three units on June 12, 2006, but had not yet installed them. This laboratory added that the equipment delivered by the company was damaged. Although the laboratory repeatedly submitted requests to Yorco Sales over a nine-month period for the damaged units to be replaced and although the units were still under warranty, the company had not done so as of the DIR's visit on April 10, 2007.

With respect to the supply of the vacuum oven with vacuum pump, the DIR's review also revealed implementation deficiencies connected to this procurement at the laboratories it visited. For example, PHL Meerut, FDTL Lucknow, PHL Bangalore, and PHL Bhubaneswar all reported that Yorco Sales delivered the equipment but that the company had not yet installed the equipment as of the DIR's visits over March 16–April 10, 2007. The DIR found all the equipment still packed and waiting in storage.

C. Payment for Equipment

HSCC provided the DIR with information on the payment status of some of the equipment for which the DIR discovered procurement and implementation problems.279 The DIR found that, out of the 17 contracts reviewed by the DIR with both procurement and implementation issues, eight had already received between 84 and 100 percent of payment. Lingering implementation problems for these contracts, including non-delivery, missing parts, and the delivery of damaged equipment, call such payments into question. In all, out of the contracts reviewed that

278 The date of delivery of this equipment is not known because it did not appear on HSCC’s consignees list and the laboratory did not provide it.

279 J. Kang e-mail to DIR (Jun. 6, 2007).
had procurement and implementation problems, 47 percent had nonetheless received substantial payment.\textsuperscript{280}

For example, despite the fact that GBC Scientific Equipment had delivered damaged AAS equipment to PHL Thane, HSCC reported that it had already paid USD 1.25 million of the total contract value of USD 1.37 million.\textsuperscript{281}

Despite the fact that Shimadzu Asia Pacific had not delivered a gas liquid chromatograph to PHL Pune, HSCC reported that it had already paid USD 996,893 of the total contract value of USD 1.17 million.\textsuperscript{282}

Despite the fact that Perkin Elmer had delivered a gas chromatograph with six columns with missing parts to SDCL Aurangabad, HSCC reported that it had already paid USD 141,786 of the total contract value of USD 183,840.\textsuperscript{283}

Thus, the DIR found several examples of companies that had already received payment for equipment, despite implementation deficiencies.

**Civil Works Procurement and Implementation**

In its review of the civil works component of the FDCBP, the DIR observed various problems in both procurement and implementation. The DIR has identified specific examples of deficiencies in the procurement process, though only a full investigation of the civil works procurement process, including interviews with losing bidders and procurement officials, will reveal whether these issues flow from underlying fraud or corruption. In addition, the DIR found widespread implementation deficiencies at the sites it visited. The fact that procurement officials and, in one case, a laboratory issued some completion certificates and that the officials did not address such problems in their supervisory roles demonstrates ineffective administration of the implementation process for civil works.

**A. Civil Works Procurement**

The DIR reviewed the procurement processes for nine of the civil works projects under the FDCBP. The DIR identified indicators of favoritism in three of these procurements.

\textsuperscript{280} HSCC Details of Payments (Jun. 6, 2007).
\textsuperscript{281} Ibid.
\textsuperscript{282} Ibid.
\textsuperscript{283} Ibid.
In the award of the contract for the expansion of the SDL Bangalore facility, the BEC members failed to disqualify Rohit Kumar Das Construction (RKDC), the winning bidder, even though the company provided false information in its bid submission. The tender documents in this procurement contained a form that required bidders to declare whether they had also submitted bids for other civil works contracts that were under consideration by FDCBP procurement officials.284 In its bid submission, RKDC declared that it had not.285 The DIR found that contradicting this declaration, RKDC had submitted a separate bid for the renovation of the SDL Bhubaneswar facility, which was still under consideration at the time.286

RKDC made the same type of false declaration in a second procurement. In its bid for the construction of the SFDL Goa facility, RKDC was declared the lowest evaluated responsive bidder.287 In its bid for this project, the company again provided a form that falsely declared that it had not submitted bids for any other procurement.288 This procurement occurred within the same time period as the other procurements for which RKDC submitted bids.289

Two BEC members, S. Mukhopadhayay and C. P. Singh, participated in all three procurements for which RKDC submitted its bids.290 Given that the procurements occurred within weeks of each other, the DIR would have expected the BEC members to recognize RKDC’s false declaration. The tender document states that “even though the bidders meet the qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements.”291 However, rather than disqualify RKDC pursuant to this guideline, the BEC recommended RKDC for the award of the contract in two of the procurements, and the MOHFW awarded both contracts to the company.292 That the BEC recommended RKDC for two of the contracts and that the MOHFW awarded the contracts to the company despite the company’s false declaration suggest that procurement officials favored the company in the procurement process.

---

284  HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr,&Goa/PM/O4, p. 21 (Oct. 4, 2004).
285  Bid of Rohit Kumar Das Construction, p. 77 (undated).
286  Ibid.
287  BER, HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr & Goa/PM/04, p. 10 (Jan. 14, 2005).
288  Bid of Rohit Kumar Das Construction, p. 52 (date unknown).
289  BER, IFB/139/CBP/BHUB,MOREH/PM/O4, pp. 1–6 (Oct. 12, 2004) and BER, HSCC/IFB/139/CBP/ Chen(f),Chen(d),Bglr & Goa/PM/04, pp. 1–2 (Jan. 14, 2005).
290  Ibid.
291  HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr,&Goa/PM/O4, pp. 10 and 12 (Oct. 4, 2004).
The DIR identified another potential problem with RKDC’s bid for the expansion of the SDL Bangalore facility. RKDC was required to submit a bank guarantee demonstrating sufficient credit. The bank guarantee that RKDC submitted appears to be suspicious. First, the bank guarantee was not submitted as part of its bid, but was submitted by fax dated January 2005, almost three months after the date of the bid submission. Second, the bank guarantee was almost identical to the bank guarantee that had been submitted for the construction of the State Food and Drug Laboratory Goa. Both bank guarantees have the exact same signature and date. Even though the bank guarantee for SDL Bangalore was apparently signed in November 2004, it was not faxed until three months later. RKDC’s bid for the construction of the State Food and Drug Laboratory Goa was reviewed by the same procurement officials as the bid for the SDL Bangalore. Pursuant to tender document requirement, RKDC gave HSCC authorization to confirm the authenticity of the guarantee with the bank; however, it does not appear that the procurement officials did so. Despite the questionable nature of the SDL Bangalore bank guarantee, the MOHFW awarded the contract to RKDC.

The DIR identified another civil works procurement issue that also suggests efforts by procurement officials to favor one bidder over another. For the procurement of the construction of the CFL Ghaziabad facility in tender HSCC/IFB/139/CBP/FRSL/PM/BUII/04, the BER did not seek clarification from a lower bidder, even though documents suggest that the bidder met some of the criteria in question and would have been able to meet the other criteria in question if allowed to clarify its submission. In that procurement, the BEC disqualified Devan Chand, a lower bidder that had met all technical and commercial criteria, for not complying with the post-qualification criteria. The BER reported that the company failed to satisfy the requirement that bidders have a financial turnover of at least INR 70 million (USD 1.6 million) in any two years. The BER also stated that the com-

---

293 HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr,&Goa/PM/O4, p. 8 (Oct. 4, 2004).
294 Bid of RKDC, p. 6 (undated).
295 Compare bid of RKDC for SDL Bangalore p. 6 (undated) with bid of RKDC for the construction of State Food and Drug Laboratory Goa, p. 184 (undated).
296 Ibid.
297 BER, HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr & Goa/PM/04, pp. 1–4 (Jan. 14, 2005).
298 HSCC/IFB/139/CBP/Chen(f),Chen(d),Bglr,&Goa/PM/O4, p. 8 (Oct. 4, 2004); Bid of RKDC for SDL Bangalore, p. 146 (undated).
301 Throughout this section, the USD equivalent value is provided for convenience only and is calculated using the rate of INR 45 = USD 1.
pany failed to report its ability to obtain INR 9 million (USD 200 thousand) in credit in a format that was required by the procurement process.303

The DIR reviewed Devan Chand’s bid and determined that the company did in fact submit a turnover statement that clearly stated that it repeatedly had a financial turnover exceeding the required amount.304 The statement reported turnover of INR 81.5 million (USD 1.8 million) in 2000 to 2001, of INR 82.6 million (USD 1.8 million) in 2002 to 2003, and of INR 81.6 million (USD 1.8 million) in 2003 to 2004.305 The company also submitted documents that supported its turnover statement.306 With respect to the second criterion in question, the company submitted a document that demonstrated its ability to obtain the required amount of credit from a bank: a letter written from Canara Bank to HSCC, entitled “Solvency Certificate,” which described the company as a trustworthy, respectable client that could be trusted for an amount of INR 9 million (USD 200 thousand).307 The BEC correctly noted that this letter did not specifically provide the company with a credit of INR 9 million (USD 200 thousand),308 but the letter suggests that the company might have been able to obtain such a guarantee had it been asked to clarify its bid submission. However, the BEC did not seek any clarification from Devan Chand and instead recommended Winner Constructions, a higher bidder, for the contract.309 The MOHFW awarded the contract to Winner Constructions.310 Thus, at the very least procurement officials appear to have performed their roles ineffectively by disqualifying the lower bidder on incorrect grounds. The disqualification could also reflect that the procurement officials deliberately and corruptly favored a higher bidder.

B. Civil Works Implementation

With respect to implementation deficiencies associated with the civil works component of the FDCBP, the DIR found widespread problems at the sites it visited. Every civil works site that the DIR visited was affected to some considerable degree by implementation problems. The DIR categorized the types of civil works deficiencies into various categories, described in Table 3.

303 Ibid.
304 Bid of Devan Chand, p. 6 (Feb. 16, 2004).
305 Ibid.
306 Ibid., pp. 36–65.
307 Ibid., p. 70.
309 Ibid., p. 4.
310 Contract Award Agreement with Winner Constructions (May 28, 2004).
Table 3. Types of Civil Works Implementation Deficiencies at Sites Visited

<table>
<thead>
<tr>
<th>Facility (Project Type)</th>
<th>ELC</th>
<th>WAT</th>
<th>CEM</th>
<th>WDM</th>
<th>CNT</th>
<th>REQ</th>
<th>CON</th>
<th>GM</th>
<th>MAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CIPL Ghaziabad (Renovation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 CFL Ghaziabad (Construction)</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 FDTL Lucknow (Renovation)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 SFL Gorakhpur (Construction)</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 FDL Mumbai (Construction)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 PHO Mumbai (Renovation)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 SDTRL Bhubaneswar (Renovation)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 SFDL Raipur (Construction)</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 SDL Bangalore (Expansion)</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ELC is electrical issues; WAT is water supply and infrastructure issues; CEM is cement render poor quality and other cement problems; WDM is water damage/mold problems; CNT is concrete issues; REQ is additional work required; CON is construction issues; GM is general maintenance issues; MAT is poor-quality materials.

Figure 11 shows the number of implementation problems that the DIR detected at each site visited.
Figure 11. Number of Civil Works Implementation Problems at Sites Visited

Note: MAT is poor quality materials; GM is general maintenance issues; CON is construction issues; REQ is additional work required; CNT is concrete issues; WDM is water damage/mold problems; CEM is cement render poor quality and other cement problems; WAT is water supply and infrastructure issues; ELC is electrical issues.

Figure 12 shows the frequency of each type of implementation problem at the nine civil works sites that the DIR visited.

Figure 12. Frequency of Types of Civil Works Implementation Problems

Note: ELC is electrical issues; WAT is water supply and infrastructure issues; CEM is cement render poor quality and other cement problems; WDM is water damage/mold problems; CNT is concrete issues; REQ is additional work required; CON is construction issues; GM is general maintenance issues; MAT is poor-quality materials.
The categories are described below.

1. **Electrical Problems**

The DIR found that two of the nine facilities that were inspected, though already constructed, remained unoccupied because they were not yet connected to utilities, including power service. For example, though construction work for CFL Ghaziabad was completed in November 2005, the building was still unoccupied at the time of the DIR’s visit on March 15, 2007, because of power and water supply problems.

In addition, the DIR found problems associated with the electrical systems that had been installed at six of the nine laboratories that it visited. After inspecting the site, the DIR’s civil engineer reported:

Electrical switches and outlets and lighting and plumbing fittings were of poor quality and had, in many cases, been carelessly installed. It was clear that both the design and installation of the electrical system were haphazard and had not been properly planned and supervised. Junction boxes were scattered in an arbitrary fashion over the ceilings, and there were several locations where wiring had to be surface mounted, because no provision had been made in the design for concealed wiring in conduits, which should be the norm for a newly constructed building.

Electrical switches, outlets, and lighting fixtures were also misaligned. The DIR detected similar problems at the new construction site at SFL Gorakhpur, which in addition had exposed wiring for fans and lights. Although the FDL Mumbai site was still under construction when the DIR visited, electrical problems were already apparent. The contractor had installed a number of electrical connection boxes haphazardly on the walls and ceilings with no apparent planning or design (see Photo Gallery 1, pages 139–142, for images showing electrical problems).

2. **Water Supply and Infrastructure Problems**

The DIR found water supply and infrastructure problems at three of the nine sites it visited. As previously described, CFL Ghaziabad was completed in November 2005 but was still unoccupied at the time of the DIR’s March 2007 visit because it lacked water and power supplies. At CFL Ghaziabad, SFL Gorakhpur, and SFDL Raipur, plumbing work, especially on waste pipes, was below standard. Plumbing was made of cheap, flexible plastic tubing rather than properly fitted with rigid
pipes and U-traps (see Photo Gallery 2, pages 143–146, for images showing supply and infrastructure problems).

3. Cement Render and Other Cement Problems

Three civil works sites had cement problems. The DIR found that the cement render at FDL Mumbai and SDL Bangalore was of poor quality and inadequately applied to the walls. The render’s adhesion to the structural concrete was poor and it slumped in places, forming settlement cracks. In some places, large areas of render had broken away from the underlying concrete, especially where the contractor had placed electrical conduits and connection boxes on the ceilings and beams. Some of the render could be broken off the wall by hand. The DIR’s civil engineer reported that this was probably due to “too much water” in the render and “not enough cement in the mix.” Many of these areas required extensive repair work. At SFDL Raipur, the DIR detected substantial cracks in the infill brickwork because of insufficient cement in the mortar binding the bricks together (see Photo Gallery 3, pages 147–148, for images showing cement problems).

4. Water Damage and Mold Problems

Various water damage problems appeared at five of the nine civil works sites that the DIR visited. For example, at SFDL Raipur’s new construction, the DIR found damp patches on the ceiling of the upper floor, indicating that the roof leaked and had not been properly waterproofed. The DIR’s civil engineer also found that at the renovation project at SDTRL Bhubaneswar, “there was clearly no effort made to clean off or neutralize the mold that had already formed on the building because of absorbent render applied years ago.” As a result, the mold had grown through the new paint, drastically affecting the building’s appearance. At SFL Gorakhpur’s new facility, the DIR’s civil engineer noted cracking in the roof waterproofing, which “may be the cause of the damp penetration inside the building, which was noted in several locations.” At CFL Ghaziabad’s new facility, numerous cracks and a wall that leaned open several centimeters meant that water damage had occurred inside (see Photo Gallery 4, pages 149–152, for images showing water damage and mold problems).

5. Concrete Problems

The DIR found problems with concrete at four of the nine sites visited. For example, at the renovation of SDTRL Bhubaneswar, the DIR found that the external concrete plinth was starting to break up, possibly due to inadequate cement in the concrete. At the expansion project at SDL Bangalore, the concrete lintels
Detailed Implementation Review, India Health Sector

over the door openings exhibited signs of “honeycombing,” indicating significant vibrations after pouring. Careless workmanship in the casting of the concrete was also apparent at this site: a wooden block was found embedded in the concrete of a column, and a piece of formwork was found cast into a ground beam (see Photo Gallery 5, pages 153–154, for images showing concrete problems).

6. General Construction Issues

The DIR found general construction problems at six of the nine sites visited. At SDL Bangalore, the contractor RKDC had begun construction on the laboratory expansion in May 2005 but had completely stopped in November 2006 and abandoned the site. An HSCC consultant who was on site informed the DIR that the contractor had not responded to several written requests from HSCC to re-start the work. The consultant said that based on his conversations with RKDC, it appeared that the company did not take into account the fact that construction material in Bangalore was far more expensive than material in Bhubaneswar, where the company was also operating, when the company submitted its bid for the project. The consultant thought that RKDC did not have the funds to complete the project, despite providing information in its bid that it was financially sound and had the necessary funds. The laboratory staff at SDTRL Bhubaneswar, the site of the other civil works contract awarded to RKDC, reported similar implementation issues regarding this company.

Significant construction problems also existed at SDTRL Bhubaneswar, even though the contractor claimed to have finished construction in October 2005. For example, the DIR’s civil engineer reported that “the ceramic wall tiling applied to walls and around workbenches has been particularly badly applied. Wall surfaces are wavy and uneven, the edges of the workbenches are rough and have large amounts of excess cement hanging down, and the finish at edges is poor.” Parts of the laboratory’s ceiling were also warping and coming apart.

At SFL Gorakhpur’s new construction site, the contractor purportedly completed the construction work in November 2006, but the final construction did not match the construction plans. The plans included an approach drive and a turning circle in front of the building, but these were never built. Instead, the area in front of the building is still an orchard of mango trees.

The DIR also found construction design deficiencies at SDL Bangalore’s new construction site. Bathrooms were so small that doors could not open once the

---

311 Bid of RKDC (for Expansion of SDL Bangalore), pp. 59, 125, and 186 (undated).
toilet bowl had been fitted. Because of inadequate adhesive, tiles in the bathrooms, laboratories, and corridors were separating from the walls and in immediate danger of falling off.

At CFL Ghaziabad, some of the suspended ceiling was collapsing due to poor installation (see Photo Gallery 6, pages 155–158, for images showing general construction problems).

7. Additional Work Required

The DIR determined that at four of the nine sites visited, additional work was needed to bring the projects into conformity with the tender requirements. For example, at SDTRL Bhubaneswar, the laboratory staff stated that the contractor had left the construction of the microbiology lab incomplete. The DIR’s civil engineer corroborated this information: “Several doors that should have been fitted or renewed were not done. The instrument room lacks two doors. The microbiology lab lacks some doors and an airlock.” The laboratory director informed the DIR that he had issued a complaint to the MOHFW and HSCC officials regarding the incomplete work and that these officials informed him that the completion of the work would be handled through another civil works tender in the future. At CFL Ghaziabad, the DIR discovered that one of the main structural columns of the main building had moved outwards by several centimeters. Additional work was needed in order to make that building structurally sound (see Photo Gallery 7, pages 159–162, for images showing problems that require additional work).

8. General Maintenance Issues

Two of the nine civil works sites that the DIR visited suffered from a lack of general maintenance. The new CFL Ghaziabad facility was completed in November 2005 but had never been used due to the lack of utility service. As a result, the location had fallen into disrepair. The DIR’s civil engineer reported that “as a result of being left unoccupied for 16 months, the building was showing many signs of deterioration and neglect, with thick layers of dust everywhere, festoons of cobwebs, and the messy results of being inhabited by a flock of pigeons.” The new facility at SFL Gorakhpur had been unoccupied since November 2006 because the building had no power supply and was showing similar signs of deterioration and neglect (see Photo Gallery 8, pages 163–164, for images showing general maintenance problems).
9. Poor Quality of Materials

The DIR found that companies used poor-quality materials at seven of the nine sites visited. At CFL Ghaziabad, FDTL Lucknow, and SFDL Raipur, the aluminum windows were below standard and in many instances did not fit properly into their frames, leaving areas of daylight around them. None of the windows had sealing strips inserted into their grooves, creating noticeable airflow when the windows were closed. These laboratories were also equipped with low-quality lighting and plumbing fixtures. At SFL Gorakhpur, the DIR found that the architraves around window and door frames were of poor quality as well and that little had been done to seal around the frames (see Photo Gallery 9, pages 165–168, for images showing problems with the use of poor-quality materials).

C. Issuance of Completion Certificates

The DIR found that despite these widespread implementation deficiencies, HSCC and one laboratory issued completion certificates for three of the civil works projects that the DIR reviewed.312 Completion certificates are issued when civil works projects are concluded to certify that the works have been carried out as per required specifications and have been completed satisfactorily within the specified time schedule.313 The completion certificates are signed either by HSCC on behalf of the MOHFW or by the laboratory officials. When the certificates are signed by the laboratory officials, they are forwarded to HSCC. After a completion certificate is issued, the contractor can receive full payment for the work.

HSCC issued a completion certificate for the new construction of SFDL Raipur.314 The fact that the civil work was certified as complete contradicts the DIR's findings. For this site, the DIR noted problems associated with six of the different problem areas described above. DIR investigators noted that from a superficial point of view, the new facility appeared to be in acceptable condition. But their more careful inspection revealed problems associated with plumbing, cement, mold, leakage, concrete, and quality of materials. As a result, it appears that the procurement officials who oversee the certificate process ineffectively performed their roles in supervising the quality of work under the FDCBP.

312 Handing-Over Taking-Over Note for SFDL Raipur between HSCC and the State of Chhattisgarh (Jun. 25, 2007); Handing-Over Note for SDTRL Bhubaneswar between HSCC and SDTRL Bhubaneswar (undated); and for CFL Ghaziabad, Letter from Director FRSL Ghaziabad to HSCC (Sep. 14, 2007).
313 Ibid.
At SDTRL Bhubaneswar, the controller informed the DIR that the laboratory had issued a completion certificate, despite the fact that the contractor abandoned the project before the work was done. The contractor had left the construction in the microbiology room incomplete and the other work performed was of poor quality, as noted above. The controller explained that HSCC’s supervising official never visited the work site while the construction was going on, which resulted in the poor-quality work. The controller informed the DIR that the contractor was able to get the laboratory’s approval for the completion certificate by arranging it “in connivance” with a junior staff member at the laboratory. The controller added that the laboratory had initiated its own internal review to identify improper activity by its staff. The DIR reviewed the certificate in question and concluded that the certificate appears to be fraudulent. When compared with other certificates, the SDTRL Bhubaneswar certificate does not appear to be in the official format, lacks signature blocks, and has parts that are handwritten.315

Figure 13 shows in Example 1 the completion certificate issued by HSCC for the SFDL Raipur and in Example 2 the apparently fraudulent completion certificate issued for the SDTRL Bhubaneswar.

---

Figure 13. Comparison of Completion Certificates

Example 1

HANDING OVER/TAKING OVER NOTE

The project “Construction of State Food and Drug Laboratory at Raipur” under Capacity Building Project is completed in terms of contract and hereby handed over to State of Chhattisgarh as per enclosed inventories.

Handed over by
HiSEC (India) Limited

Taken over by
Drug Controller

(On behalf of MOHFW, New Delhi) (On behalf of State of Chhattisgarh)

Example 2

HANDING OVER NOTE

The work “RENOVATION OF STATE FOOD AND DRUG LABORATORIES” at Bhubaneswar at Orissa-under Capacity Building Project is completed in terms of contract and handed over for beneficial use to State Government as per enclosed inventories.

Handed Over By

Taken Over By
Project Reports and Assessments

The DIR examined the FDCBP’s project reports and assessments. These reports consisted of prior-reviews that the Bank conducted of the contract procurement process before giving its no-objection authorization and one post-review that was conducted to assess procurement issues. Bank officials have also drafted six relevant aides-mémoire based on their supervision missions. Because FDCBP is ongoing, the amount of supervision documentation available for the DIR’s review was limited.316

The DIR’s review revealed that the project reports and assessments to date inadequately detected and reported the widespread nature of procurement deficiencies in the equipment and civil works procurement processes. In the instances where the Bank did recognize such issues, there was no evidence to indicate it had diligently attempted to correct the problems observed. Although the Bank noted some civil works implementation issues, it still upgraded the project’s implementation performance rating from unsatisfactory to moderately satisfactory in its two most recent aides-mémoire.

A. Prior-Reviews

The MOHFW was required to seek the Bank’s prior-review and no-objection before awarding contracts in equipment procurements that exceeded USD 300,000 and civil works contracts that exceeded USD 500,000.317 The DIR reviewed all equipment contracts and two civil works contracts where the Bank conducted a prior-review. In each of these cases, the Bank provided its no objection. In many of these instances, the Bank overlooked indicators of fraud and corruption identified by the DIR. When the Bank did identify such issues, there was no evidence to indicate it had addressed and corrected these issues prior to giving its no-objection.

1. Contracts Where the Bank Conducted a Prior-Review and Gave Its No-Objection Despite the Existence of Problems in the Procurement Process

As discussed earlier, in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003 for an AAS, the steering committee had overruled the BER and recommended GBC Scientific Equipment for the contract. The MOHFW awarded the contract to GBC Scientific Equipment318 despite indicators that the supplier did not meet post-

---

316 There is no Implementation Completion Report for FDCBP because the project is ongoing.
317 PAD, Annex 6(A), Table B, pp. 48–49.
318 Contract Award Agreement with GBC Scientific Equipment (Feb. 8, 2005).
qualification criteria. In its prior-review, the Bank did not express concern over the fact that the steering committee had overruled the BER, that GBC Scientific Equipment’s compliance with the post-qualification criteria was questionable, or that another company submitted a complaint highlighting similar concerns. The Bank gave its no objection to the MOHFW’s awarding of the contract to GBC Scientific Equipment.

For the procurement of microwave digestion units in tender HSCC/PUR/CBP(F&D)/ICB-1D/2003, the Bank also did not note indicators of corruption in its prior-review. As described earlier, the DIR found that two individuals that had served on both the BEC and the steering committee reversed their conclusions reached while on the BEC when sitting on the SC with respect to the responsiveness of a company’s bid to the required specifications. Documents reviewed by the DIR reveal that the Bank did not question the steering committee’s recommendation to award the contract to CEM Corporation and gave its no-objection.

In the procurement for the construction of the CFL Ghaziabad facility in tender HSCC/IFB/139/CBP/FRSL/PM/BUII/04, the BER failed to seek clarification on post-qualification criteria from Devan Chand, a lower bidder that had met all technical and commercial criteria, and disqualified the bidder, even though the bidder’s bid documents suggested that the bidder met some of the post-qualification criteria in question and would have been able to meet the other criteria in question if allowed to clarify its submission. Despite these issues in the procurement process, the Bank conducted a prior-review and gave its no-objection to the awarding of the contract to the higher bidder, Winner Constructions.

2. Contracts Where the Bank Conducted a Prior-Review and Identified Problems in the Administration of the Procurement Processes, but Gave Its No-Objection Even Though the Problems Had Not Been Remedied

In tender HSCC/PUR/CBP(F&D)/ICB-1A/2003 for the procurement of a high-pressure liquid chromatograph mass spectrophotometer, procurement officials made inconsistent requests for technical specification clarifications across bidders that

---

319 Compare BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, p. 52 (Feb. 19, 2004) with Steering committee minutes, sec. on AAS (undated).
321 BER, HSCC/PUR/CBP(F&D)/ICB-1D/2003, p. 171 (Feb. 6, 2004); Steering committee minutes, p. 5 (Feb. 24, 2004).
322 Bank letter to HSCC (Jul. 5, 2004).
324 Bank letter to HSCC (May 7, 2004).
resulted in the disqualification of the lowest bidder, Shimadzu, even though documents suggest that Shimadzu would have successfully clarified its specifications, if allowed to do so.\textsuperscript{325} The steering committee allowed a higher bidder, Thermo Finnigan, to clarify its submission.\textsuperscript{326} The Bank conducted a prior-review for the procurement of this item. In a letter to the MOHFW on November 19, 2004, the Bank stated that “based on our analysis (column 1) of the information tabulated by HSCC in the selection of its evaluation report sent, it appears to us that none of the bids can be considered to be fully technically responsive. However, several of the non-complying criteria are relatively minor deviations, and others lack information or a full compliance statement that the bidder was obliged to provide. The latter can be addressed by asking for clarifications.”\textsuperscript{327} The MOHFW responded on December 13, 2004.\textsuperscript{328} In its response, the MOHFW provided clarification information only for Thermo Finnigan, not for any other company, including Shimadzu, the lowest bidder.\textsuperscript{329} Based on documentation reviewed, the DIR is not aware whether the MOHFW requested clarifications from all companies, as per the Bank’s suggestion. The Bank gave its no-objection on January 13, 2005, to the awarding of the contract to Thermo Finnigan.\textsuperscript{330} The MOHFW awarded the contract to Thermo Finnigan on March 4, 2005.\textsuperscript{331} The DIR saw no indication that the Bank followed up on its instructions to the MOHFW to seek clarification from Shimadzu as well as from Thermo Finnigan.

For the procurement of an HPLC isocratic system with 10 columns, two integrators, and one degassor in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the Bank also identified issues in the procurement but appears not to have followed through in addressing its concerns. As discussed earlier, in that procurement, the steering committee reached a conclusion that differed from the BER’s recommendation in a way that favored a higher bidder, Waters India, over a lower bidder, Indtech Analytical.\textsuperscript{332} In its prior-review of the contract, the Bank informed the MOHFW on November 19, 2004, that before the Bank could give its no-objection, the MOHFW needed to seek clarification from Indtech Analytical to confirm that it was non-responsive.\textsuperscript{333} The Bank also identified areas of non-compliance for

\textsuperscript{325} Steering committee minutes, sec. on HPLC Mass Spectrophotometer (undated).
\textsuperscript{326} Ibid.
\textsuperscript{327} Bank letter to the MOHFW, sec. on HPLC Mass Spectrophotometer (Nov. 19, 2004).
\textsuperscript{328} MOHFW letter to Bank, sec. on HPLC Mass Spectrophotometer (Dec. 13, 2004).
\textsuperscript{329} Ibid.
\textsuperscript{330} Bank letter to the MOHFW (Jan. 13, 2005).
\textsuperscript{331} Contract Award Agreement with Thermo Finnigan (Mar. 4, 2005).
\textsuperscript{332} BER, HSCC/PUR/CBP(F&D)/ICB-1A/2003, pp. 32–4 and 49; Steering committee minutes, sec. on HPLC Isocratic System (undated).
\textsuperscript{333} Bank letter to the MOHFW, sec. on HPLC Isocratic System (Nov. 19, 2004).
Waters India and said that the MOHFW “may obtain clarification on the points of non-compliance [for Waters India] as noted.” 334 Again, on January 13, 2005, the Bank wrote to the MOHFW highlighting that the MOHFW “has not, as requested, provided any additional explanation of its reason for classifying the bid from M/s Indtech Analytic as ‘technically non-responsive.’” 335 In that letter, the Bank also again commented on the Waters India submission, stating that Waters India’s clarification did not serve to clarify non-compliance issues raised by the Bank. 336

After that, the MOHFW replied to the Bank in a letter dated February 4, 2005, in which it responded that since the steering committee had concluded that Indtech Analytical was technically non-responsive, the MOHFW had decided not to seek clarification, despite the Bank’s instructions. 337 With respect to Waters India, the MOHFW relied on the clarification that Waters India had initially submitted as evidence of compliance, which in fact did not answer the Bank’s concerns. 338

The Bank gave its no-objection on May 13, 2005, despite the fact that its concerns had not been addressed. 339 The MOHFW awarded the contract to Waters India on June 7, 2005. 340 Thus, it appears that the Bank did not follow through on its initial concerns regarding the treatment of Indtech Analytic and Waters India in the procurement process.

B. Post-Reviews

The FDCBP PAD provides that “in addition to a review of the independent self-audit reports called for in this project, Bank staff will also conduct post-award reviews during supervision missions.” 341 The aides-mémoire show that at least six supervision missions have been conducted under the FDCBP. However, the DIR has found only one post-review conducted in the four years of the FDCBP, prepared by the Bank’s procurement consultant over June 19–23, 2006. 342

The one post-review covered the contracts awarded by the MOHFW during the period from April 1, 2004, to March 31, 2005. 343 According to the procurement post-review report, the Bank’s consultant reviewed eight civil works contracts, five

---

334 Ibid.
335 Bank letter to the MOHFW, sec. on HPLC Isocratic System (Jan. 13, 2005).
336 Ibid.
337 MOHFW letter to Bank, sec. on HPLC Isocratic System (Feb. 4, 2005).
338 Ibid.
339 Bank letter to the MOHFW (May 13, 2005).
340 Contract Award Agreement with Waters India (Jun. 7, 2005).
341 Ibid.
343 Ibid., p. 1.
of which the DIR also reviewed, and 10 equipment contracts, four of which the DIR also reviewed.344

As part of the procurement review, the consultant looked at ITBs, bidding documents, BERs, award of contract recommendations, conclusion of contracts, and processing time of procurement to, among other things, “determine whether the procurement procedure outline[d] in the procurement guidelines and loan/credit agreement are followed.”345 Although the review was also meant to “highlight any evidence that indicates fraudulent and corrupt practice in project implementation that should be considered for further investigation,” the consultant reported that he did not conduct an implementation review because of time restraints because of long travel distances and the fact that Bank officials had not provided consignee lists.346 With respect to travel distances, the DIR notes that CIPL Ghaziabad, one of the sites under review, was located only 30 minutes from the consultant’s work location.

In his post-review of the procurement process, the Bank consultant did not report on certain procurement issues that might be indications of corruption. For example, for the procurement of a gas chromatograph with six columns in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the MOHFW had overruled the BER's recommendation and awarded the contract to Perkin Elmer Instruments, even though the company had not met all post-qualification criteria. A letter from the MOHFW to the Bank stated that the steering committee participated in the procurement process,347 though the DIR has not been made aware of any documentation supporting this fact. In the letter, the MOHFW did not indicate why it overruled the BER recommendation and awarded the contract to Perkin Elmer Instruments when the company was not fully compliant with all criteria. The MOHFW awarded the contract to Perkin Elmer Instruments on October 29, 2004.348

The contract’s post-review concluded that all Bank standards had been followed in the procurement.349 Thus, the Bank appears to have overlooked the fact that Perkin Elmer Instruments did not satisfy all post-qualification criteria, as had been reported in the BER.

344 Ibid., pp. 4–5.
345 Ibid., pp. 2–3.
346 Ibid., pp. 2–3 and 5.
347 MOHFW letter to Bank (Jul. 21, 2004).
349 Procurement Post Review Supervision Mission Report for Food and Drugs Capacity Building Project, sec. on Gas Chromatograph (undated).
Similarly, for the procurement of an ion chromatograph in tender HSCC/PUR/CBP(F&D)/ICB-1A/2003, the Bank’s consultant did not report any procurement problems. In that procurement, Indtech Analytical, a higher bidder that did not comply with all technical criteria, was awarded the contract over the lowest bidder, Waters India, whose technical compliance was also unclear. The BER declared that only Indtech Analytical was technically and commercially responsive, recommending it for the contract, and declared Waters India to be non-responsive with respect to two technical parameters. However, the DIR’s review of the BER’s comparison statement on technical evaluation of bids reveals that Indtech Analytical did not provide any information for eight parameters and provided information for five product specifications that did not meet their respective parameters. The BER noted these 13 deviations but chose to ignore them in recommending Indtech Analytical for the contract. In contrast, the BER disqualified the lowest bidder, Waters India, for its two technical deviations without attempting to seek clarifications.

The post-review for the procurement of this item concluded that all Bank standards had been followed.

C. Aides-Mémoire

The DIR reviewed six aides-mémoire of the Bank’s supervisory missions for the FDCBP. Consistent with the DIR’s findings, the aides-mémoire reported long delays associated with the procurement processes. The second aide-mémoire for the mission that took place from November 18 to December 1, 2004, downgraded the project’s performance rating for procurement from satisfactory to unsatisfactory, citing poor progress in procuring equipment. The third aide-mémoire also rated equipment procurement to be unsatisfactory for similar reasons, recommending that the MOHFW “urgently” address the fact that it “[i]t often takes over six months to decide on the bids after [they] have been opened.” The report added that “such delays are undermining implementation” and stated that laboratory effectiveness would improve once equipment was procured.

---

350 BER, HSCC/PUR/CBP(F&D)/ICB/1A/2003, pp. 11–12, 50, and 57 (Feb. 19, 2004).
351 Ibid., pp. 351–54.
352 Ibid., pp. 11–12, 41–42, and 50.
353 Procurement Post Review Supervision Mission Report for Food and Drugs Capacity Building Project, sec. on Ion Chromatograph (undated).
357 Ibid., pp. 4 and 7.
The report signaled that the performance rating would change to satisfactory when contracts for all procurement planned for the first two years were awarded and when a full-time coordinator for the PCU was selected. The performance rating for implementation of procurement was unsatisfactory in the February 2006 midterm review, again for reasons of delay. In the fifth aide-mémoire, Bank officials upgraded the equipment performance rating for procurement from unsatisfactory to satisfactory, reporting that “equipment procurement has significantly improved and equipment deliveries have begun.”

With respect to equipment implementation, the first aide-mémoire identified one of the several issues that the DIR detected related to maintenance: “Concern was expressed by several States that reliable maintenance is often difficult to ensure when equipment is procured centrally and not through State procedures.” Later aides-mémoire also reported instances of delayed installation, non-supply of essential parts, and malfunction. However, these reports underreported the extent to which problems with equipment implementation occurred.

For example, in the fifth and sixth aides-mémoire, Bank officials also detected problems related to civil works implementation, such as utility problems, maintenance problems, and major delays due to stopped construction. Despite highlighting these issues, the most recent aide-mémoire stated that “reportedly the quality of works in the completed laboratories varies from fair to good; there is a scope for improvement.” Nonetheless, despite identifying some problems, the fifth and sixth aides-mémoire gave the FDCBP a moderately satisfactory performance rating for implementation progress. Based on this, it appears that the extent of civil works implementation problems as represented in the report does not reflect the extent of the problems that the DIR found affecting the condition of the civil works.

---

358 Ibid., p. 3.
Gallery 1 – Electrical Problems

Central Food Laboratory (CFL) Ghaziabad-1
(poor workmanship—misaligned switches and outlets)

Central Food Laboratory (CFL) Ghaziabad-2
(wiring to AC outlet overlooked and had to be surface mounted)
Central Food Laboratory (CFL) Ghaziabad-3
(plug-less electric cable)

Food and Drug Laboratory (FDL) Mumbai
(poor workmanship)
Port Health Organization (PHO) Mumbai  
(surface-mounted wiring)

Food and Drug Testing Laboratory (FDTL) Lucknow  
(poor finishing of new electrical fittings)
State Food Laboratory (SFL) Gorakhpur
(poorly installed fan)
Gallery 2 – Water Supply and Infrastructure Problems

Central Food Laboratory (CFL) Ghaziabad – 1
(poorly installed - broken WC)

Central Food Laboratory (CFL) Ghaziabad – 2
(tin can supporting plumbing work on roof)
Central Food Laboratory (CFL) Ghaziabad – 3
(bad workmanship - poorly executed drainage from lab sink)

State Food Laboratory (SFL) Gorakhpur – 1
(bricks supporting plumbing work on roof)
State Food Laboratory (SFL) Gorakhpur - 2
(poor plumbing work - cheap pipe with no U-bends)

State Food and Drug Laboratory (SFDL) Raipur
(urinals with shoddy, cheap waste pipes)
State Food Laboratory (SFL) Gorakhpur – 3
(poor plumbing work - cheap pipe with no U-bends)
Gallery 3 – Cement Render and Other Cement Problems

Food and Drug Laboratory (FDL) Mumbai
(cement render of poor quality)

State Food and Drug Laboratory (SFDL) Raipur
(low quality of mortar)
State Drug Laboratory (SDL) Bangalore – 1
(low-quality mortar with a piece of wood inside)

State Drug Laboratory (SDL) Bangalore – 2
(poor workmanship - block of wood entombed in concrete)
Gallery 4 – Water Damage and Mold Problems

Central Indian Pharmcopoeia Laboratory (CIPL) Ghaziabad
(peeling paint on underside of beam)

Central Food Laboratory (CFL) Ghaziabad – 1
(signs of water penetration through poorly fitted roof)
Central Food Laboratory (CFL) Ghaziabad – 2
(water penetration through suspended ceiling)

State Food Laboratory (SFL) Gorakhpur – 1
(cracks on waterproofing layer of roof)
State Food Laboratory (SFL) Gorakhpur – 2
(bad sealing around edge of the dome)

State Drug Testing and Research Laboratory (SDTRL)
Bhubaneswar
(bad exterior paintwork failed in short time)
State Food and Drug Laboratory (SFDL) Raipur
(crack developing in rendered brickwork)
Gallery 5 – Concrete Problems

Food and Drug Laboratory (FDL) Mumbai
(average to poor-quality concrete work)

State Drug Testing and Research Laboratory (SDTRL)
Bhubaneswar
(New surface water drain - cracks and crazing indicate poor-quality render over the concrete)
State Drug Laboratory (SDL) Bangalore – 1
(poor brickwork and bad-quality mortar)

State Drug Laboratory (SDL) Bangalore – 2
(poor brickwork – cracking away from wall occurred due to low cement content)
Gallery 6 – General Construction Issues

Central Food Laboratory (CFL) Ghaziabad-1
(poor construction work - upper roof of gatehouse not level)

Central Food Laboratory (CFL) Ghaziabad-2
(design fault – upstairs doors opening onto service shaft)
State Food Laboratory (SFL) Gorakhpur
(front entrance - note lack of driveway as mango trees remain)

Food and Drug Laboratory (FDL) Mumbai
(poor brickwork and low quality of mortar)
State Drug Testing and Research Laboratory (SDTRL) Bhubaneswar
(bad finishing, very sharp edges)

State Food and Drug Laboratory (SFDL) Raipur
/design fault – door cannot be fully opened/
State Drug Laboratory (SDL) Bangalore – 1
(site abandoned by the contractor)

State Drug Laboratory (SDL) Bangalore – 2
(site abandoned by the contractor)
Gallery 7 – Additional Work Required

Central Food Laboratory (CFL) Ghaziabad – 1
(corner is breaking away from structure)

Central Food Laboratory (CFL) Ghaziabad – 2
(corner is breaking away from structure)
State Food Laboratory (SFL) Gorakhpur – 1
(approach drive and turning circle were never built)

State Food Laboratory (SFL) Gorakhpur – 2
(water pipe is not fixed to the wall)
State Drug Testing and Research Laboratory (SDTRL)  
Bhubaneswar – 1  
(bad tiling and door is missing)

State Drug Testing and Research Laboratory  
(SDTRL) Bhubaneswar – 2  
(bad plastering)
Food and Drug Testing Laboratory (FDTL) Lucknow
(poor finishing of new surface-mounted electrical wiring)
Gallery 8 – General Maintenance Issues

Central Food Laboratory (CFL) Ghaziabad – 1
(lack of maintenance – pigeon nestings)

Central Food Laboratory (CFL) Ghaziabad – 2
(cobwebs present in most rooms)
State Drug Testing and Research Laboratory (SDTRL) Bhubaneswar
(severe mold coming through new paintwork on building)

Food and Drug Testing Laboratory (FDTL) Lucknow
(cobwebs present in most rooms)
Gallery 9 – Poor Quality Materials

Central Food Laboratory (CFL) Ghaziabad – 1
(poor-quality, badly fitted aluminum window)

Central Food Laboratory (CFL) Ghaziabad – 2
(failed suspended ceiling)
Food and Drug Testing Laboratory (FDTL) Lucknow
(poor-quality, badly fitted aluminum window)

State Food Laboratory (SFL) Gorakhpur
(poor plumbing work - cheap pipe with no U-bends)
Port Health Organization (PHO) Mumbai
(poor-quality, badly fitted aluminum window)

State Drug Testing and Research Laboratory (SDTRL)
Bhubaneswar
(poor-quality work and materials causing false ceiling to warp and break up)
State Food and Drug Laboratory (SFDL) Raipur - 1
(very poor finishing work on doorframe - gap not properly filled and paint splashed around haphazardly)

State Food and Drug Laboratory (SFDL) Raipur – 2
(urinals with shoddy, cheap waste pipes)
ORISSA HEALTH SYSTEMS DEVELOPMENT PROJECT

Overview

Project Objective

The eastern state of Orissa is one of the most impoverished states in the country. In 1998, more than 44 percent of its 31.66 million people lived below the national poverty line, and they were subject to recurrent cyclones, floods, and droughts. Such poverty and disaster created significant health problems: a disproportionately high disease burden and the highest maternal and infant mortality rates in the country. The Government of Orissa was attempting to address these problems through fiscal and health sector policy reform, but this work had only just begun.

The World Bank's 1997 Country Assistance Strategy for India planned to use many of the Bank’s projects to support Indian states—including the poorer states with the worst social indicators—that were committed to change and undertaking comprehensive economic reforms. The Country Assistance Strategy also emphasized health-care as a focus of the Bank's poverty alleviation work, including “a major and rapidly growing program of [International Bank of Reconstruction and Development] / [International Development Association (IDA)] assistance to the health sector to … above all improve health systems and institution building in

1 Government of Orissa Health and Family Welfare Department, Orissa Health Systems Development Project Project Implementation Plan, pp. 1–2 (Apr. 1, 1998) (hereinafter OHSDP PIP). At that time, the most recent national poverty statistics stated that 29.1 percent of India’s overall population was below the poverty line. OHSDP PIP, p. 2.
2 OHSDP PIP, p. 4.
3 Ibid., p. 2 (listing then-current anti-poverty campaigns); World Bank South Asia Region Health, Nutrition, and Population Sector Unit, Project Appraisal Document on a Proposed Interim Trust Fund Credit in the Amount of SDR 56.8 Million to India for an Orissa Health Systems Development Project, p. 2 (May 4, 1998) (hereinafter OHSDP PAD).
4 World Bank, Memorandum of the President of the IBRD, the IDA, and the IFC to the Executive Directors on a Country Assistance Strategy for India, pp. 8–10 (Dec. 19, 1997) (hereinafter 1997 India CAS).
selected states.” To implement this strategy, the Bank chose to support the Government of Orissa’s efforts to develop Orissa’s health sector.

The Orissa Health Systems Development Project (OHSDP)—funded largely by a USD 76.4 million IDA Interim Trust Fund credit—aimed to assist the Government of Orissa in improving its health resource policies and the quality and coverage of the state health system. The project sought to achieve these goals by: (1) improving the quantity and quality of the state’s health services delivery at the community and secondary levels; and (2) strengthening the management capacity of the state’s health system. The OHSDP targeted the secondary healthcare level, with a special focus on safe motherhood and child survival, to complement other IDA projects focusing on primary healthcare in Orissa.

**Summary of Findings**

The DIR of the OHSDP found that:

1. the implementation and procurement of the OHSDP’s civil works and equipment components exhibited significant indicators of fraud, including severe construction deficiencies in buildings that construction supervisors certified as complete and up to specification; and 17 types of equipment that, while purportedly in compliance with technical standards, were found noncompliant or hazardous upon basic inspection;

2. there is a risk of fraud and corruption because the project audit reports identified several areas of inadequate project financial management and financial recordkeeping but did not provide a complete and transparent accounting of project expenditures; and

3. the Bank observed some of these problems in its project supervision, but its reliance on apparently incorrect Borrower-provided data appears to have delayed these observations until the project was nearly closed and it was too late to address the problems.

---

6  OHSDP PAD, p. 2.
7  World Bank South Asia Region Human Development Unit, Implementation Completion and Results Report on a Credit in the Amount of SDR 56.8 Million (USD 76.4 Million Equivalent) to India for the Orissa Health Systems Development Project, pp. 1 and 3 (Sept. 26, 2006) (hereinafter OHSDP ICR) (IDA credit); OHSDP PAD, p. 2 (project goals). The “community level” refers to primary healthcare facilities in smaller communities, while the “secondary level” refers to hospitals in larger communities which receive referrals from smaller facilities.
8  OHSDP PAD, p. 4.
9  OHSDP ICR, p. 7.
Implementation of the OHSDP’s civil works and equipment components also exhibited significant indicators of fraud. For civil works, the DIR, aided by a civil engineer, visited 55 project hospitals; at 93 percent of them, it observed problems like uninitiated or incomplete work, severely leaking roofs, crumbling ceilings, molding walls, and non-functional water, sewage, and/or electrical systems. Four hospitals were locked shut and entirely unused. Yet the construction management consultants (CMCs) who supervised the work certified 38 of these hospitals to be complete to project specifications, and in February 2006 the Orissa Department of Health and Family Welfare (DOHFW) reported that work at 45 of them was complete. The DIR reviewed the project documents for 21 hospitals and found 10 cases in which the DIR’s field observations directly contradicted the CMC’s completion certifications.

For equipment, the DIR, aided by a biomedical engineer, inspected equipment at project hospitals and identified 17 types of equipment that violated project technical specifications, including five types of equipment that were hazardous. Hazardous equipment included autoclaves (hot steam surgical equipment sterilizers) that could explode and neonatal equipment that lacked adequate electrical grounding, potentially exposing babies and their medical staff to electrical shocks. These units were procured from firms whose bids either omitted required technical compliance certificates or contained certificates that appeared fraudulent. Yet ELMARC, the firm responsible for evaluating these bids and inspecting procured equipment, not only overlooked these problems, but also failed to respond to equipment quality complaints sent to them by medical officers, and oversupplied substantial amounts of equipment.

Consistent with findings of fraud in implementation, the OHSDP’s civil works and equipment procurements also exhibited indicators of fraud and bid rigging. In civil works, the DOHFW conducted 12 tenders to hire architects and CMCs to design, procure, and supervise the works; nine of these tenders exhibited indicators of bid rigging. Indicators of fraud and bid rigging in the construction services procurements included very low competition for contracts; the exclusion of low-priced bidders in 25 percent of tenders; and contract prices that exceeded cost estimates in 80 percent of tenders. In equipment procurement, ELMARC appeared to have favored certain bidders by overlooking only some firms’ omitted documentation or permitting only certain firms to amend their otherwise losing bids.

The DIR’s analysis of the project’s reports and assessments resulted in both positive and negative findings. The Bank’s financial management specialists appear to
have been diligent in pursuing problems regarding project audit reports, though these issues remain unresolved. However, none of the OHSDP’s project design documents mentioned fraud and corruption as a project risk or detailed how the Bank would supervise the decentralized project activities. Instead, the Bank followed its stated policy of delegating almost all project monitoring and evaluation to the Borrower, and thus relied on the DOHFW to report project progress accurately.

The DIR’s review of the Orissa Auditor General’s OHSDP audit reports identified weaknesses in the project’s financial management and record keeping that create a risk of fraud and corruption. The audit reports did not provide a timely, complete, and transparent review of project expenditures—so much so that the Bank is still awaiting audit certification of more than USD 30 million in Bank-reimbursed project expenditures. The audits also state that the project routinely spent far less than it requested in its budget; its certified civil works expenditures do not match reported civil works activity; and its financial records lacked proper balances, which are an important protection against fraudulent transactions.

The DIR’s project implementation findings suggest that the DOHFW either was unaware of the project’s problems or chose not to report them to the Bank. The Bank eventually observed and documented some of the civil works and equipment problems that the DIR identified as indicators of underlying fraud. However, because the Bank waited until the project’s final year to conduct extensive field visits and verify the quality of reported project outputs, the institution did not learn of these problems until it was too late to remedy them. This indicates a weakness in the Bank’s supervision methodology that, according to project design documents, has not been addressed in subsequent Indian state health projects. The OHSDP’s overall rating of “moderately satisfactory” also stands in stark contrast to the significant civil works and equipment problems observed by the DIR. As the Bank’s project supervision team itself wrote, this suggests that the Bank’s project evaluation metrics may place too much emphasis on statistical indicators of development effect, and too little emphasis on project outputs.
Project Background

Project Design

A. Components

The OHSDP was composed of three components: (1) management development and institutional strengthening; (2) improving service quality, access, and effectiveness at the secondary level; and (3) improving access to basic health services at the community level. The project’s largest component was improving service quality, access, and effectiveness at the secondary level, comprising 46.5 percent of project expenditures (USD 44.8 million). To implement this component, the OHSDP funded the following: (1) the renovation of 32 District Headquarters Hospitals (DHHs), 20 Sub-Divisional Hospitals (SDHs), and 19 Area Hospitals (AHs); (2) the provision of new equipment for these hospitals; and (3) the improvement of their managerial and support capacity.

The project’s second-largest component was improving access to basic health services at the community level, which comprised 24 percent of project expenditures (USD 23.1 million). Similar to the project’s secondary-level component, implementation of the community-level component included the following: (1) the renovation of 37 existing Community Health Centers (CHCs); (2) the expansion of 48 primary health centers into larger CHCs; (3) the provision of new equipment for these centers; (4) the promotion of health services in tribal areas; and (5) the improvement of referral mechanisms between the various levels of the health system.

These two components combined constituted 70.5 percent of actual project expenditures. Their civil works elements comprised 39 percent of project expenditures (USD 37.3 million), while hospital equipment, instruments, and furnishings (EIF) accounted for 15 percent of project expenditures (USD 14.8 million).
The project’s final component, management development and institutional strengthening, comprised 4.5 percent of project expenditures (USD 4.3 million).\textsuperscript{16} It involved: (1) enhancing Orissa’s healthcare planning, management, and implementation capacity; and (2) strengthening the state’s hospital management system and major communicable disease surveillance capacity.\textsuperscript{17} In addition to these three components, the Bank reallocated approximately USD 24 million of OHSDP funds to the Bank’s Indian National Polio Eradication Project.\textsuperscript{18}

\section*{B. Implementation Structure}

\subsection*{1. Project Management}

The OHSDP was administered by a Project Management Cell (PMC), which was located within Orissa’s Department of Health and Family Welfare (DOHFW) and led by a Project Director.\textsuperscript{19} The PMC was responsible for routine project management and administration, including conducting procurement (either directly or through hired agents), maintaining flow of funds and project accounts, monitoring progress, and preparing progress reports.\textsuperscript{20} To accomplish these tasks, the PMC contained a five-person health unit to plan, implement, and monitor health-related activities; a three-person engineering unit to manage construction and maintenance; a five-person finance unit to manage project accounting; and administrative staff.\textsuperscript{21}

The PMC also supervised 30 Zilla Swasthya Samiti (district health committees), which were run by each district’s Chief District Medical Officer (CDMO). The Zilla Swasthya Samiti oversaw the day-to-day operation of hospitals in the district, including the approval of the handover of new or renovated hospitals.\textsuperscript{22}

\subsection*{2. Procurement of Civil Works and EIF}

Although the PMC was responsible for all OHSDP procurement activities, both the DOHFW and the Bank recognized that “the PMC [did] not have the capacity to undertake all civil works and EIF procurement on its own.”\textsuperscript{23} As a result, the PMC

\textsuperscript{16} Ibid., p. 37. This component was expected to comprise 11 percent of project expenditures (USD 10.1 million). OHSDP PAD, p. 4.

\textsuperscript{17} OHSDP PAD, p. 4.

\textsuperscript{18} OHSDP ICR, p. 37. Because the reallocation was in SDRs, Bank documents vary regarding whether USD 24 million or USD 25 million was reallocated. This text uses the USD 24 million figure.

\textsuperscript{19} OHSDP PIP, pp. 36–38, 40–41, and Annex III.

\textsuperscript{20} OHSDP PAD, pp. 5–6 and 49; OHSDP PIP, pp. 36–41 and Annex III.

\textsuperscript{21} OHSDP PIP, pp. 37–38.

\textsuperscript{22} Ibid., p. 41.

\textsuperscript{23} Ibid., p. 49.
hired Procurement Support Agencies (PSAs) to help it conduct project-related procurement.\textsuperscript{24} To give the project a rolling start, the DOHFW hired two PSAs on a sole-source basis for the project’s first year: the Orissa Industrial Infrastructure Development Corporation (IDCO) was hired as the civil works PSA because it had past Bank-project experience, while ELMARC Limited was hired as the EIF PSA because it had experience in equipment management.\textsuperscript{25} After the first year, the PSA contracts were to be opened to competitive bidding.\textsuperscript{26}

Because the project’s civil works component comprised many small, low-cost construction and renovation projects, the Bank expected that most contracts would be awarded by national competitive bidding (NCB), with between 2 percent and 5 percent procured by simpler national procurement procedures such as direct contracting or comparison of three firms’ price quotations.\textsuperscript{27} None of the civil works procurement would be conducted pursuant to international competitive bidding (ICB), and no more than 29 percent of the civil works budget—20 contracts costing an estimated USD 11.8 million (INR 460 million)—was expected to be subject to Bank prior-review.\textsuperscript{28} This minimized the Bank’s review of these procurements. Similarly, EIF procurement—which was timed to correspond to completed civil works—would be conducted by ICB only in cases of the bulk purchase of large and more expensive equipment, such as x-ray machines and ultrasound scanners.\textsuperscript{29} Procurement of equipment costing less than USD 200,000 would be conducted by NCB, with 15 percent of equipment procurement expected to be conducted by simpler procurement methods.\textsuperscript{30}

The Bank planned to perform prior-review on all ICB contracts; the first two NCB goods and works contracts; subsequent goods contracts over USD 200,000; subsequent works contracts over USD 300,000; and consultancy contracts equal to or exceeding USD 100,000 for firms or USD 50,000 for individuals.\textsuperscript{31}

\begin{itemize}
\item \textsuperscript{24} Ibid.
\item \textsuperscript{25} Ibid.
\item \textsuperscript{26} Ibid.
\item \textsuperscript{27} Ibid.
\item \textsuperscript{28} Ibid., pp. 49 and 51.
\item \textsuperscript{29} Ibid., p. 49.
\item \textsuperscript{30} Ibid.
\end{itemize}
3. Implementation of Civil Works and EIF

The OHSDP’s implementation mechanics varied by project component. For civil works, the PMC’s small engineering unit hired consultants to perform most of the engineering and design work because the DOHFW lacked experience in implementing such a large and complex project. The civil works PSAs were responsible for supervising construction and as a result were called construction management consultants (CMCs).

For EIF, the DOHFW relied on ELMARC—a state-owned enterprise that specialized in maintenance of professional electronic equipment—to conduct procurement, distribution, and warranty and after-sale service. According to the Project Implementation Plan (PIP), ELMARC was responsible for finalizing technical specifications and preparing bid documents; conducting technical and commercial evaluations of possible suppliers; managing tenders and purchase orders; inspecting equipment prior to delivery to the hospitals; and supervising and certifying the suppliers’ installation of the equipment. Because the DOHFW lacked the resources necessary to repair and maintain medical equipment, ELMARC also was supposed to be responsible for one-time repairs and post-warranty maintenance for procured equipment. The only exception to this general repair obligation was that sophisticated equipment, such as ultrasound scanners and x-ray machines, would be repaired by their supplier.

C. Risks, Mitigating Measures, and Controls

At the time of project approval, the Bank felt that the Government of Orissa’s limited management, planning, and coordination capacity—combined with the state’s strained finances and unproven ability to improve its governance—posed a substantial risk to the OHSDP’s success. Drawing on past project experience in the Indian health sector, the Bank’s Project Appraisal Document (PAD) identified three substantial risks to the OHSDP’s success: (1) inadequate flow of funds, insufficient budgetary allocations, and the availability of drugs, medicine, and other inputs; (2) delays in implementation because of slow procurement and recruitment of staff; and (3) the state’s poor overall financial status. The Bank did not

---

32 OHSDP PIP, p. 147.
33 Ibid., pt. 2(b) and ch. 7, pt. 2(C) (page numbers unavailable).
34 Ibid.
36 Ibid.
37 OHSDP PAD, pp. 3 and 12–13.
38 Ibid., pp. 8 and 13.
identify fraud and corruption as risks to the project, nor did it state specific plans for monitoring the OHSDP's decentralized activities.

The Bank planned to mitigate identified risks in two ways. First, the project design incorporated PMC capacity-building elements, including: (1) giving the PMC greater authority over project implementation; (2) establishing a computerized financial management system and feedback system for project management; (3) requiring the Government of Orissa to provide an adequate budget allocation for both the project and the health sector; and (4) using consultants to implement almost all of the project’s civil works and EIF activities.39

Second, the project contained a number of controls, implemented primarily by the PMC, to monitor the project's progress. The PMC bore primary responsibility for project supervision, and its monitoring was to focus on project outputs, such as building construction, equipment provision, maintenance, staffing, quality of services, and training.40 The PIP anticipated that the PMC would conduct three project impact evaluations:

- An initial baseline survey;
- A mid-term review focusing on improvement in service quality and quantity, the program’s impact on the primary healthcare system, and healthcare usage and satisfaction rates; and
- A final review focusing on the achievement of project objectives, the completion of scheduled actions, areas in need of further work, and the project’s future prospects.41

The OHSDP Credit Agreement and Project Agreement placed further responsibility on the Government of Orissa and, by implication, on the PMC. The Credit Agreement required the Government of Orissa to implement the project according to the PIP and to maintain project records, facilitate Bank inspections of the project, and provide regular project reports to the Bank, including a final report after project completion.42 The Project Agreement also required the PMC and the Government of Orissa to:

---

39 Ibid., pp. 3, 10, and 13.
40 OHSDP PIP, p. 329.
Draft, fund, and implement an Annual Work Plan that the Bank would approve following a review of the prior year’s performance;

Maintain policies and procedures adequate to monitor and evaluate the project and project-objective achievement on Bank-approved indicators;

Prepare a mid-term review, review it with the Bank, and take steps to improve performance; and

Maintain proper financial records that would be audited annually by an independent auditor and provided to the Bank within six months of the end of each project year.43

In contrast, the Bank’s project preparation documents did not detail the Bank’s supervision activities. The Bank’s Implementation Completion Report (ICR) stated that the Bank’s project supervision included regular supervision missions, procurement post-reviews, and surveys of the use of project outputs and the impact of various project measures.44

**D. Costs and Time**

The Bank expected the OHSDP to cost USD 90.7 million, of which 84 percent (USD 76.4 million) would be provided by the Bank and 16 percent (USD 14.3 million) by the Borrower.45 In actuality, the project cost USD 96.3 million, of which the Bank provided 88 percent (USD 84.5 million) and the Borrower 12 percent (USD 11.8 million).46 These figures include the reallocation of approximately USD 24 million to the National Polio Eradication Project on April 1, 2004. According to the ICR, at project closure the project had disbursed a total of USD 72.58 million.47

The OHSDP was scheduled to last five-and-a-half years, but it was given two 12-month extensions and closed on March 31, 2006.48 In total, the Bank spent USD 569,200 on project supervision, including travel and consultant costs.49 This supervision proved challenging, because the OHSDP faced many difficulties over its seven-and-a-half-year life.

---

43 Project Agreement, secs. 2.01(b), 2.02, 3.01, sched. 1, and sched. 2, paras. 1–15.
44 OHSDP ICR, pp. 24–25.
45 OHSDP PAD, p. 1.
46 OHSDP ICR, p. 37. The USD value increased over the life of the project because of changes in the SDR-USD exchange rate.
47 Ibid., pp. 5 and 52.
48 OHSDP PAD, p. 1; OHSDP ICR, p. 6.
49 OHSDP ICR, p. 53.
Project Implementation

Many of the DIR’s findings—including indicators of fraud affecting the quality of both civil works and medical equipment—were observed by the Bank’s project supervision missions. Despite these observations, the Bank rated the project’s outcome “moderately satisfactory.”

After a very slow start during its first three-and-a-half years, project spending and implementation accelerated through the two extensions to project closure. This acceleration created problems in project performance, but the PMC—for uncertain reasons—did not report them to the Bank. The Bank’s supervision missions eventually identified some of these problems, but they did so only in the project’s final year, when it was too late to correct them.

A. Natural Disasters Hampered Initial Project Implementation

The OHSDP became effective on September 8, 1998. Slightly more than one year later, a series of natural disasters caused severe project delays. In mid-October 1999, a cyclone with 135 mile-per-hour winds (217 km/h) made landfall in the Orissa district of Ganjam and killed more than 150 people. Ten days later, an even stronger super-cyclone with winds over 160 miles per hour (250 km/h, the equivalent of a category 5 hurricane) made landfall in the Orissa district of Jagatsinghpur and killed more than 10,000 people. Less than two years after these storms, persistent heavy rainfall between July and September 2001 caused Orissa to experience its worst flooding in 50 years.

These storms diverted state resources from the OHSDP and caused the state government commitment to the OHSDP to waiver. The government’s project management compounded these difficulties. In early 2000, the Government of Orissa brought in a new project official who was hostile to the program and tried to dismiss the Project Director. In an effort to prevent this, the Bank: (1) gave

---

50 Ibid., p. 1.
52 Ibid. (all four citations); New York Times, Troops Find Little is Left in Indian Area Hit by Cyclone (Nov. 14, 1999).
54 World Bank Quality Assurance Group, Quality of Supervision of Risky Projects (FY00–01), Summary Assessment Sheet, p. 3 (Nov. 16, 2001) (hereinafter QAG Review).
55 Ibid., passim.
the project a satisfactory rating, despite slow progress that otherwise would merit a lower rating; and (2) threatened to declare misprocurement, despite lacking a legal basis for doing so, in an effort to direct the Principal Secretary’s attention to the project. These efforts proved successful, and in 2001 the problematic official was replaced. The Bank also increased the “intensity of its supervision” to address procurement, funding, and financial management issues.

B. Project Status at Mid-Term

Because of the problems plaguing the project’s early years, the OHSDP had made little progress at the time of its 2002 mid-term review. After three-and-a-half years, the project had disbursed only 16 percent of its funds, and USD 59.5 million remained undisbursed. The Bank’s mid-term review stated that “implementation has been considerably slower than expected,” and that “limited institutional capacity in the [PMC] has contributed to delays,” particularly regarding the first 22 civil works projects. In a letter to the Government of Orissa accompanying its Mid-Term Review Aide-Mémoire, the Bank stated that “expeditious action” was needed to ensure that the project would be completed in time. Yet despite these issues, the mid-term review concluded that implementation had been “satisfactory overall,” save for a three-month period between December 1999 and March 2000.

The mid-term review expressed guarded hope for the project’s future, noting that implementation progress “ha[d] picked up considerably since July 2001.” The PMC reported that civil works progress was slow—16 hospitals were complete, 131 renovations begun, and 10 not yet started—but it had restructured its efforts and hired five CMCs in an attempt to speed completion. EIF activity was delayed because it was coordinated with completed civil works, but the PMC stated that it had: (1) performed initial procurement for 76 hospitals; (2) finalized procurement plans for the other hospitals; and (3) rescheduled those procurements to match the revised civil works schedule.

56 Ibid., passim.
57 Ibid., p. 3.
58 Ibid., pp. 3–4 and 15.
62 Ibid., p. 3.
63 Ibid., pp. 3 and 6.
64 Ibid., pp. 3 and 6–7.
65 Ibid., p. 7.
The Bank noted, however, that the PMC needed additional funding and staff—particularly in its engineering unit—for its plans to succeed. The Bank also expressed concern that the PMC was paying insufficient attention to maintaining equipment, training staff in the use of equipment, and training PMC staff to use the project’s electronic financial management system. These concerns would recur.

C. Continued Implementation Delays

By May 2003—just nine months before project closure—the OHSDP’s spending was still extremely low. It had disbursed only 25 percent of its credit, and the Bank found its disbursement rate “to be low and unsatisfactory.” Despite this lack of spending, the PMC reported progress: in civil works, 68 hospitals were complete, 86 other renovations had begun, and contracts were issued for the remaining three hospitals; in EIF, INR 605 million in procurement was planned for the next 10 months. The Bank rated implementation progress satisfactory, but this rating relied entirely on PMC reports: the bank's May 2003 Aide-Mémoire stated that “no physical verification of the assets created out of the proceeds of the credit has been done [to] date, but a proposal has been made to carry out such verification in FY 2003–04.” The PMC also reported that its computerized financial management system failed because of poor consultant performance and a lack of staff capacity; future reports were done in a simplified manual manner.

The OHSDP’s implementation delays led the Government of Orissa to request a project extension. The Bank conditioned its consideration of the request on the achievement, by September 2003, of a set of project benchmarks that included: (1) maintaining a consistent, adequate, and timely flow of funds; (2) awarding all contracts for procurement of goods and EIF by November 30, 2003; (3) conducting workshops with informal service providers in two districts; and (4) fully staffing the PMC.
The project failed to meet most of these benchmarks.\textsuperscript{74} In its October 2003 review, the Bank lowered the project’s implementation rating to unsatisfactory because:

- Delays associated with a new Project Director’s repeated requests for approvals from the Health and Finance Departments had caused only one-third of the planned civil works and EIF procurement to be conducted.\textsuperscript{75} As a result, total project disbursements stood at 26.5 percent, which the Bank rated unsatisfactory and flagged as a problem.\textsuperscript{76}

- The PMC allowed the contracts for three CMCs—MECON, the Orissa Construction Corporation Limited (OCCL), and the Senior Consultants Advising Group (SCAG)—to lapse.\textsuperscript{77} MECON and SCAG withdrew from the project on September 30, 2003, while OCCL gave notice that it would withdraw on October 31, 2003.\textsuperscript{78} The small PMC engineering unit assumed their responsibilities.\textsuperscript{79}

- The PMC remained inadequately staffed, project training activities were delayed, and equipment repair in 14 districts was incomplete.\textsuperscript{80}

Despite all these difficulties and the project’s unsatisfactory implementation rating, the Bank rated as satisfactory the project’s achievement of its development objectives because “although the project has been able to put in place relatively modest improvements, the unmet need in the state is so great that the project has had great developmental impact.”\textsuperscript{81}

\textbf{D. The First Extension}

In December 2003, an internal Bank memorandum generated as part of an Indian health sector portfolio performance review recommended that, given the project’s partially unsatisfactory rating and low disbursement rate, the Bank should refuse to extend the OHSDP and close it as scheduled.\textsuperscript{82} The Bank reit-

\textsuperscript{74} Country Director M. Carter letter to Principal Secretary, Health, R.N. Senapati, p. 1 (Nov. 6, 2003) (hereinafter November 6, 2003, Carter letter).

\textsuperscript{75} India: Orissa Health Systems Development Project Supervision Mission Aide-Mémoire—October 2003, p. 2 (hereinafter October 2003 Aide-Mémoire).

\textsuperscript{76} November 6, 2003 Carter letter, p. 1.

\textsuperscript{77} October 2003 Aide-Mémoire, p. 3.

\textsuperscript{78} Ibid.

\textsuperscript{79} Ibid.

\textsuperscript{80} Ibid.; November 6, 2003, Carter letter, p. 1.

\textsuperscript{81} November 25, 2003, Project Status Report (Sequence # 15), Managers’ Comments of Operations Advisor Rachid Benmassaoud.

\textsuperscript{82} Portfolio Performance Review for Health Sector, Dec. 8–9, 2003, p. 2.
erated this position in its meetings with the Government of India, arguing that “current performance does not support possibility of extension,” but it agreed to a January 2004 review to resolve the issue.83 The DIR received no records regarding this review or any other indication that it occurred.

On February 9, 2004—two months before scheduled project closure—the Government of India formally requested a two-year extension of the OHSDP.84 The OHSDP had been a problem project since October 2003, its implementation progress was unsatisfactory, and it had five project risk flags—financial management, financial performance, slow disbursement, management problems, and procurement problems.85 The most recent project audit was overdue, and only 33 percent of the project credit had been disbursed.86 Project implementation had improved, but the Bank’s task team worried that the Government of Orissa “appears to lack commitment towards supporting implementation and capacity strengthening needed to restructure and fully utilize the project funds. … Based on the status of progress to date, the task team is not confident that the state government has sufficient and necessary commitment to implement the project even if it is extended.”87 An upcoming election in Orissa would further delay any project restructuring.88

Despite these challenges, the task team favored attempting to finish the Bank’s work in Orissa because the state government could not finish incomplete works with its own funds.89 The task team recommended extending the project for nine months—to complete ongoing works and finance awarded contracts—and transferring the project’s approximately USD 24 million in savings to the Indian National Polio Eradication Project (NPEP).90 The Bank formally proposed a one-year extension to finish project activities in exchange for the project’s meeting a set of conditions. The DOFHW agreed and the extension was approved on March 31, 2004.91 On April 1, 2004, the Bank transferred USD 24 million to the NPEP.92

---

83 India Health Sector Portfolio Performance Review, Dec. 8–9, 2003, Minutes of Actions Agreed between the Bank, DEA, the Line Ministries and Project Authorities, pp. 2–3.
85 Ibid.
86 Ibid.
87 Ibid.
88 Ibid., p. 2.
89 Ibid.
90 Ibid. This USD 24 million came from: (1) savings on staff salaries; (2) savings on consultant services; (3) savings on operational and maintenance expenses; (4) the cancellation of the Health Department Building; and (5) exchange rate savings. November 25, 2002, Project Status Report (Sequence # 12), Project Status.
91 DEA Director A. Seth letter to DOFHW Secretary R.N. Senapati, p. 1 (Mar. 23, 2004); DOFHW Secretary R.N. Senapati letter to DEA Director A. Seth, pp. 1–2 (Mar. 26, 2004); Country Director M. Carter letter to DEA Joint Secretary R. Bannerji, p. 1 (Mar. 31, 2004).
92 OHSDP ICR, p. 5.
E. Reported Performance Improvements

After the extension, the PMC consistently reported improvements in project performance. In May 2004, the Bank lifted project risk flags regarding financial management, financial performance, and project management because the PMC delivered an overdue audit report and reported improvements in project spending, flow of funds, and the completion of planned project activities. The PMC also informed the Bank that it had made progress in civil works, completing 118 hospitals and handing 75 over to local CDMOs.

The Bank’s May 2004 project supervision review expressed concern with the implementation of other project components and continued to rate the project’s implementation progress as unsatisfactory. Despite PMC commitments to the contrary, procurement was lagging severely: INR 86 million (USD 1.9 million) in drug contracts and INR 222 million (USD 4.9 million) in EIF contracts had been awaiting award since December 2003. These delays were caused by a state government decision to freeze project implementation in late 2003 pending the Bank’s project extension decision.

The PMC, however, continued to report improved performance. In September 2004, the Bank upgraded the OHSDP’s implementation progress rating to satisfactory because the pace of civil works had “increased substantially”—the PMC reported that 123 hospitals were complete; 94 hospitals were handed over; the CMC’s contracts were extended; and a long-term maintenance and repair plan had been drafted. EIF procurement remained delayed—149 NCB and local shopping contracts worth INR 190 million (USD 4.2 million) awaited award—but by mid-November 2004 the PMC reported awarding 125 NCB and local shopping contracts worth INR 238 million (USD 5.3 million).

In December 2004, the Bank rated all project elements as satisfactory and lifted all project problem flags. The PMC reported that all but 29 project hospitals had been completed and that bottlenecks regarding electrical and water connections
were mostly resolved.\textsuperscript{101} December 2004 also marked the first time that the Bank noted problems with the quality of the civil works.\textsuperscript{102} In its \textit{Aide-Mémoire}, the Bank stated that several of the hospitals it visited had been completed for more than a year before but were not operational because of a lack of electricity or water.\textsuperscript{103} One hospital, which the contractor claimed could be completed by the end of January 2005, likely could not be finished on time.\textsuperscript{104} The task team realized that this forewarned of a potentially significant problem: “If facilities are not fully built by the end-of-project date, there will be great difficulties in completing them later on. The mission reiterated that the Bank would reimburse only those activities and services completed before project closure. There are certainly other facilities, not visited, which also have these problems. They must be addressed urgently.”\textsuperscript{105}

\section*{F. The Second Extension}

On February 4, 2005—two months before the end of the first extension—the Government of India formally requested a second one-year extension of the OHSDP to complete the project’s planned work.\textsuperscript{106} The request enclosed a letter from the OHSDP Project Director that detailed the project’s planned spending for the extension year, but not its implementation plans.\textsuperscript{107} Expected expenses included INR 309.5 million for “procurement of EIF for project and non-project hospitals”; the inclusion of non-project hospitals may extend beyond the project’s scope.\textsuperscript{108} Based on the PMC’s reports of project progress, the opportunity for the OHSDP to finish its work, and the extension period’s opportunity “for IDA’s continued engagement with Orissa,” the Bank approved the extension on March 28, 2005.\textsuperscript{109}

\begin{thebibliography}{100}
\bibitem{101} \textit{Ibid.}, p. 2.
\bibitem{102} The Bank had conducted site visits in earlier supervision missions, including visiting 12 districts during the Mid-Term Review, an unspecified number of locations in early 2003 (by Bank architect Rakesh Sahni), and to Puri and Jaipur in September 2004. However, the Bank’s \textit{aides-mémoire} did not detail any observations made during these visits. Mid-Term Review \textit{Aide-Mémoire}, p. 1; May 2003 \textit{Aide-Mémoire}, p. 1; and September 2004 \textit{Aide-Mémoire}, p. 1.
\bibitem{103} December 2004 \textit{Aide-Mémoire}, p. 2.
\bibitem{104} \textit{Ibid.}
\bibitem{105} \textit{Ibid.}
\bibitem{106} DEA Director A. Tewari letter to Country Director M. Carter (Feb. 4, 2005).
\bibitem{107} \textit{Ibid.}; Project Director M. Panigrahi letter to DEA Director A. Seth, Annex II (Jan. 29, 2005) (hereinafter January 29, 2005, Panigrahi letter).
\bibitem{108} January 29, 2005, Panigrahi letter.
\bibitem{109} P. Kudesia memorandum to M. Carter, pp. 1–3 (Mar. 17, 2005); Country Director M. Carter letter to DEA Joint Secretary R. Bannerji (Mar. 28, 2005).
\end{thebibliography}
G. Site Reviews and Implementation Quality Concerns

In mid-2005, after six years and two project extensions, the Bank began to visit and report on project sites extensively. The problems it found led it to downgrade the OHSDP’s implementation progress rating to moderately unsatisfactory.110

The PMC reported that the OHSDP’s civil works were mostly complete, with all but 19 hospitals complete; transformers installed in all but 133 hospitals and connected to the power grid in all but 72 hospitals; and water supply provided in all but 98 hospitals.111 It also claimed to have a plan for long-term civil works maintenance.112 The Bank, however, found that OHSDP-funded hospitals and equipment often had not been commissioned or were improperly cared for.113 In June and July 2005, Bank architectural consultant Rakesh Sahni visited 10 hospitals and found numerous problems, including that all 10 hospitals lacked installed and functioning generators and transformers; nine hospitals lacked functioning water supplies; five hospitals’ civil works were incomplete; three hospitals lacked complete installation of doors, windows, and tiles; and one hospital had deficient structural cement and concrete.114 Sahni concluded that the status of four hospitals—DHH Angul, DHH Bhadrak, CHC-I Chandabali, and SDH Nilgiri—was so poor that the PMC should rescind their contracts because the work could not be completed before project closure.115

Similarly, the PMC reported that EIF implementation largely was finished, with equipment training planned and outstanding procurement of drugs and EIF either completed or under way.116 The PMC did, however, admit that maintenance was insufficient because, while it had prepared a maintenance and equipment manual, it lacked funds to perform actual maintenance work.117

In contrast to the PMC’s statements of progress, Dr. David Porter, the Bank’s biomedical engineering consultant, visited Bhubaneswar’s capital hospital and Sakhopal’s Area Hospital and identified more than a dozen equipment problems at the two hospitals, including the non-use of an x-ray machine, defibrillator, and ventilator; unresolved technical problems preventing the use of a heart stress test-

111 Ibid., p. 3.
112 Ibid., p. 4.
113 Ibid., p. 3.
114 Ibid., pp. 23–30.
116 Ibid., pp. 3 and 5.
117 Ibid., p. 4.
ing device; improper installation of operating lamps and the electrical cable for an air conditioner; the installation and handover of a radiology machine without any performance or safety testing; and extremely poor cleaning and maintenance of an incubator, a radiant warmer, and a phototherapy unit.\textsuperscript{118} Dr. Porter also noted that—contrary to the PIP, Project Agreement, and Credit Agreement—the PMC had failed to make ELMARC contractually responsible for equipment maintenance.\textsuperscript{119}

The Bank’s December 2005 supervision mission retained the project’s moderately unsatisfactory implementation rating.\textsuperscript{120} The PMC stated that it would complete 10 of the remaining civil works but three would not be complete until after project closure and two—CHC-I Chandabali and SDH Nilagiri—would be cancelled.\textsuperscript{121} The PMC reported progress in water and power supply as well: it stated that water was supplied at 122 hospitals and transformers were installed in 133 hospitals, 113 of which were connected to the power grid.\textsuperscript{122}

The PMC also reported that EIF procurement was almost complete and that ELMARC had conducted a physical verification of equipment installation at 121 OHSDP-funded hospitals.\textsuperscript{123} ELMARC’s interim findings identified failures of equipment installation and use at some sites, but the Bank expressed

\[ \ldots \text{serious reservations about the accuracy of the information reported in [the summary] since the status of EIF items observed by IDA mission members during visits to project health facilities in various districts is significantly at variance with ELMARC’s report. Many other issues came to light during these visits, for example in respect of the poor quality of some supplied products, the evident lack of sufficient technical scrutiny of product quality, installation, commissioning and user training, and the general poor management of installed assets including basic cleaning and hygienic practices.} \] \textsuperscript{124}

The Bank expressed further concern about inadequate maintenance of infrastructure and equipment, as well as insufficient arrangements to manage war-

\begin{itemize}
  \item \textsuperscript{118} Ibid., pp. 16–19.
  \item \textsuperscript{119} Ibid., p. 20.
  \item \textsuperscript{120} India: Orissa Health Systems Development Project Supervision Mission Aide-Mémoire December 2005, p. 1 (hereinafter December 2005 Aide-Mémoire).
  \item \textsuperscript{121} Ibid., p. 4.
  \item \textsuperscript{122} Ibid.
  \item \textsuperscript{123} Ibid.
  \item \textsuperscript{124} Ibid., pp. 4 and 16.
\end{itemize}
ranty claims and ensure post-warranty care and servicing of equipment. In March 2006, in its final project review before closure, the Bank raised the project’s implementation progress and financial management ratings to moderately satisfactory. This increase from moderately unsatisfactory was not caused by recent performance improvements; rather, the Bank raised the ratings because of “the remarkable progress on implementation during the last three years, and based on the assessment of the overall project[.]”

The PMC reported continuing progress on civil works, with only seven hospitals still incomplete. No progress was made on transformer installation, and equipment was not installed in hospitals without adequate power or water. The PMC also reported that EIF procurement was complete; however, the Bank also reported the findings of an equipment survey that it conducted between January and February 2006: equipment that was operational amounted to only 40 percent of the total economic value of equipment, and 15 percent of major equipment (worth 4.4 percent of total equipment costs) was below acceptable quality levels. The Bank further noted that the project still had not made progress in developing an equipment maintenance plan.

H. Project Evaluation

On balance, the Bank’s evaluation considered the project troubled but ultimately successful. The Bank’s ICR rated the OHSDP’s project outcome as moderately satisfactory because, in the Bank’s judgment, the project’s indicators—which tracked health and health-care usage statistics, budget allocations, passage of new policies, and medical facility staffing rates—performed positively. The ICR’s project outcome evaluation did not weigh heavily the project’s civil works and EIF outputs. However, their problems contributed to its assessment of a moderate overall risk to the sustainability of the OHSDP’s development outcomes.

125 Ibid., pp. 5–6 and 16.
129 Ibid., p. 3.
130 Ibid.
131 Ibid., p. 6.
132 OHSDP ICR, p. 6.
133 Ibid., pp. 1 and 16–20.
134 Ibid., pp. 20 and 23.
The Bank reported civil works implementation to be successful: the ICR stated, based on PMC reports, that all hospitals had been physically completed (save two under litigation), with five finished after project closure using government funds. While completion of electricity connections and water supply was ongoing at some hospitals, the project reportedly provided transformers to all medical centers to provide an “uninterrupted” power supply. The project provided 20 percent more bed space than the 3,007 beds planned in the PIP, and new labor rooms and operation theaters were constructed in 140 hospitals and renovated in the remainder. A Bank review indicated that only about 10 percent of the works were below “acceptable” condition, as determined by “a superficial assessment of the status of floors, walls, fabric, roofing, woodwork, windows, paintwork, etc.”

The ICR also noted the EIF problems observed in the PMC’s equipment survey, adding that warranties had expired for approximately 22 percent of the procured EIF goods. Despite the failure of the computerized financial management system, the ICR rated financial management to be satisfactory because accounts were still maintained and manually generated reports were submitted monthly.

The ICR attributed delays in the OHSDP’s civil works progress to initial delays by IDCO and the PMC’s insufficient staffing and oversight capacity. It concluded that the project’s EIF problems were caused primarily by delays in EIF procurement, which in turn resulted from delays in civil works completion. But as detailed below, the DIR found indicators that the PMC’s reported civil works and EIF accomplishments were overstated and that the civil works and EIF problems noted by the Bank’s supervision missions involved indicators of fraud.

---

135 Ibid., p. 41.
136 Ibid.
137 Ibid.
138 Ibid., p. 42.
139 Ibid., pp. 14 and 42.
140 Ibid., p. 13.
141 Ibid.
142 Ibid., p. 12.
The DIR’s Approach to the OHSDP

The DIR reviewed the OHSDP because, during the Department of Institutional Integrity’s (INT) investigation into the Bank’s Reproductive and Child Health Project, a firm admitted paying INR 500,000 (USD 11,000) to the Orissa State Minister of Health and other ministry officials to facilitate the payment of INR 2.5 million (USD 55,500) in non-Bank-funded invoices. In addition, the Bank had received four complaints alleging collusion and corrupt practices by OHSDP bidders and PSA officials. Including the OHSDP in the DIR also brought a state-specific project within the DIR’s scope; this is significant because state-specific projects are an increasingly significant feature of the Bank’s lending to India and its health sector.

Pursuant to its risk-driven methodology, the DIR selected areas to review based on an analysis of the project’s fiduciary and development risks. By focusing on high-risk areas, the DIR maximized its ability to identify indicators of fraudulent or corrupt schemes that could significantly affect the project’s outcomes. The DIR’s risk analysis and areas of focus are detailed in Table 1.

Table 1. The DIR Selected Two Areas of Review for the OHSDP

<table>
<thead>
<tr>
<th>Area of Review</th>
<th>Fiduciary Risk</th>
<th>Development Risk</th>
</tr>
</thead>
</table>
| Civil Works    | Civil works comprised 39 percent of total project expenditures (USD 37.3 million).  
The works were highly decentralized, occurring at 156 different sites throughout Orissa that varied in remoteness, size, and work complexity.  
Third-party CMCs procured and supervised the works on behalf of the Borrower.  
The Bank’s supervision missions identified civil works as an area of concern. | The hospital renovations and expansions were a critical part of the project’s two largest components, improving service quality, access, and effectiveness at the secondary level; and improving access to basic health services at the community level. As the PIP explained, “a functioning and safe building is essential for proper healthcare delivery.” |
| Equipment      | Equipment comprised 15 percent of project expenditures (USD 14.8 million).  
Equipment procurement and installation was managed entirely by ELMARC, a third-party procurement service agency, on behalf of the Borrower.  
The Bank’s supervision missions and ELMARC’s own survey identified equipment quality and use as a matter of significant concern. | The provision, installation, and use of equipment was also an important part of the project’s two largest components, improving service quality, access, and effectiveness at the secondary level; and improving access to basic health services at the community level. |
Detailed Implementation Review, India Health Sector

a. Project documents are inconsistent regarding whether the OHSDP funded work at 156 or 157 hospitals. This report presumes that the OHSDP funded 156 hospitals.

b. OHSDP PIP, chapter 7, pt. 1A, 1.0.

After identifying these areas of focus, the DIR conducted distinct reviews of implementation and procurement for civil works and equipment.

A. Implementation

To review project implementation, the DIR conducted site visits to a selection of OHSDP-funded hospitals, emphasizing: (1) hospitals of different sizes; (2) hospitals in diverse geographic areas, including tribal areas; (3) remote hospitals; and (4) hospitals that the Bank had not visited in its supervision missions. The DIR also intentionally revisited some hospitals seen by Bank supervision missions to determine whether previously identified problems had been remedied.

In total, the DIR visited 55 OHSDP-funded hospitals in 23 districts, representing 35 percent of all project sites.145 These visits included 59 percent of all renovated District Headquarter Hospitals (DHHs; 19 of 32), 53 percent of all renovated Area Hospitals (AHs; 10 of 19), and approximately 25 percent of all renovated Sub Divisional Hospitals (SDHs; 5 of 20) and Community Health Centers (CHCs; 21 of 85).

The DIR visited sites whose civil works were managed by each of the CMCs, including:

- 48 percent of the hospitals managed by OCCL (11 of 23);
- 45 percent of the hospitals managed by IDCO (23 of 51);
- 31 percent of the hospitals managed by K.K. Agrawal (10 of 32);
- 27 percent of the hospitals managed by SCAG (8 of 29); and
- 9 percent of the hospitals managed by MECON (2 of 22).146

145 These hospitals, by district, were as follows: In Angul, DHH Angul and SDH Talcher; in Balasore, CHC-I Soro; in Baragarh, DHH Baragarh, CHC-II Bijipur, and CHC-I Sohella; in Bhadrak, DHH Bhadrak; in Bolangir, CHC-I Loisinga; in Boudh, AH Kantamal and CHC-II Manamunda; in Cuttack, SDH Athagarh, AH Baramba, CHC-II Kanpur, CHC-I Mahanga, and AH Narasinghpur; in Deogarh, DHH Deogarh; in Dhenkanal, DHH Dhenkanal, CHC-I Hindol, and SDH Kamakhanagar; in Ganjam, AH Aska, DHH Berhampur, and CHC-I Kalicote; in Jagatsinghpur, DHH Jagatsinghpur; in Jajpur, DHH Jajpur and AH Jajpur Road; in Jharsuguda, DHH Jharsuguda and CHC-II Madurai; in Kalahandi, AH Kesinga; in Khurda, CHC-I Balipatna, CHC-I Banapur, AH Bolagarh, DHH Capital Hospital, and DHH Khurda; in Koraput, SDH Jeypore, DHH Koraput, AH Podagada, and CHC-II Pottangi; in Malkangiri, DHH Malkangiri and CHC-I Mathili; in Nawarangpur, CHC-II Dabugaon, DHH Nawarangpur, and AH Umarkote; in Puri, CHC-II Bangurigao, AH Nimpara, and DHH Puri; in Rayagada, DHH Rayagada; in Sambalpur, CHC-II Charma, CHC-II Garposh, CHC-II Rairakhol, and DHH Sambalpur; in Sonepur, DHH Sonepur and CHC-II Ullunda; and in Sundargarh, DHH Sundargarh, SDH Kuchinda, and CHC-II Majhipada.

146 The identity of the CMC responsible for one hospital was unclear.
At each hospital, the DIR met with the most senior medical official present to obtain their comments regarding the state of the hospital, its equipment, and the OHSDP’s outcomes. This included discussions regarding hospital staffing, patient and medical procedure volume, civil works and equipment issues, and the medical officials’ impressions of the project and the CMC in charge of the work at their hospital. The DIR also reviewed any written complaints in the medical official’s possession. After this meeting, the DIR—accompanied by medical officials—took the site and observed its condition. These site visits focused on issues expected to be high risks in Orissa, such as water leakage and construction material quality, as well as issues given high priority in the project, such as biomedical waste management and the provision of adequate power and water supplies.

As part of its site visits, the DIR inspected equipment present in the hospitals, focusing on equipment in the operating theaters, delivery suites, laboratories, x-ray facilities, and storage rooms. Equipment was examined to determine whether it met the bid documents’ technical specifications; had been installed properly; and was in use. The DIR paid particular attention to equipment that the hospitals’ medical officials identified as problematic. The DIR was unable to examine some equipment because it was kept in locked storage.

The DIR retained two expert consultants—a civil engineer and a biomedical engineer—to assist with these site visits and provide their professional opinions regarding the condition of the hospitals and their equipment.

Prior to conducting its field visits, the DIR obtained the OHSDP acting Project Director’s written authorization to visit the project hospitals of its choice. The Project Director promised to have the OHSDP’s junior engineer accompany the DIR on its site reviews and to provide two vehicles and drivers to transport the DIR review staff. Unfortunately, the vehicles were not delivered (the DIR hired local cars instead), and the OHSDP junior engineer participated only in the first day’s hospital visits because, after receiving significant verbal criticism from the doctors at DHH Dhenkanal and SDH Kamakhyanagar, he told the DIR that he was a volunteer and preferred to not participate in future visits.
B. Contract Procurement

The DIR performed a review of all of the 502 OHSDP contracts, worth USD 46.7 million, for which the DIR obtained contract documents. The DIR performed detailed reviews of bid documents, bid evaluation reports, and contracts for:

- All design, architect, and CMC consultant procurements;
- A selection of 52 civil works contracts (33.5 percent of all civil works contracts) that included all five CMCs and 25 contracts on which the DIR had conducted implementation reviews; and
- 33 equipment contracts for a variety of equipment types that had been identified: (1) in complaints; (2) in ELMARC’s 2006 equipment survey as exhibiting quality issues; or (3) as exhibiting fraud and corruption indicators by the DIR’s broader contract data analysis.

For these selected contracts, the DIR integrated its review of contract documents with its analytical reviews of contract data. In order to detect patterns indicating possible fraud or corruption, the DIR analyzed this information both within each tender and across tenders. The DIR did not review any local contracts related to the OHSDP.

The DIR’s review of OHSDP procurement was frustrated by delays in obtaining OHSDP contract documents and compiling their data for analysis. In late September 2006, the Government of Orissa agreed to send all OHSDP contract documents to the DIR’s New Delhi facility. A month later, however, the government reversed its position and refused to: (1) send original documents to New Delhi because of an ongoing audit and delivery logistics concerns; or (2) provide the DIR with photocopies because of the number of contracts involved. After a week of negotiations, in early November the Government of Orissa agreed to permit the DIR to scan all of the documents in Orissa using DIR staff and equipment. The DIR scanned the contract documents in December and completed data entry in February 2007—two months later than the other DIR projects.

---

147 These included 155 civil works contracts worth USD 30.9 million, 183 EIF contracts worth USD 12.1 million, and 147 drugs contracts worth USD 3.6 million. The U.S. Dollar value is calculated using the market exchange rate on the date of the contract.

148 The targeted review included 57 percent of IDCO’s contracts (28 of 49); 27 percent of SCAG’s contracts (eight of 29); 22 percent of K.K. Agrawal and OCCL’s contracts (seven of 32 and five of 23, respectively); and 18 percent of MECON’s contracts (four of 22).
C. Project Reports and Assessments

The DIR reviewed the Government of Orissa-generated OHSDP project audit reports from the 2002 project mid-term to 2006, as well as a supplemental audit report for 1999–2003. To date, the Bank has not received the OHSDP supplemental project audit reconciling previously uncertified expenditures.\textsuperscript{149}

The DIR also reviewed the OHSDP’s design, supervision, and evaluation documents. These included the PAD, PIP, \textit{Aides-Mémoire}, Project Status Reports, Implementation Status Reports, the ICR, available procurement post-review reports, and available project audit correspondence. The DIR analyzed these materials to understand how the Bank assessed fraud and corruption risks in the project’s design and to determine whether the indicators of fraud and corruption identified by the DIR were captured and addressed by the Bank’s supervision systems.

Findings

Civil Works

The DIR’s review of the OHSDP’s civil works component found numerous indicators of fraud in its implementation and procurement. In implementation, the DIR observed significant civil works problems at 93 percent of the hospitals that it visited. Of these 55 hospitals, 54 had construction problems in their newly built or renovated portions; all 55 exhibited signs of water damage that caused mold and sometimes structural damage; 51 had problems with their electrical systems; 33 had problems with their water supply; 38 had problems with their sewage and drainage systems; and four were locked shut and entirely unused. To evaluate whether these implementation problems were indicators of fraudulent practices, the DIR reviewed the PMC’s project documents regarding the 21 hospitals exhibiting the most severe civil works problems. In almost half these cases, the documents included CMC certifications that the hospital’s civil works—which the DIR found seriously deficient—were complete and up to specification. These inconsistencies are a strong indicator of fraudulent practices, and their frequency suggests that

\textsuperscript{149} P. Kudesia letter to R.N. Senapati (Oct. 3, 2007).
some of the problems observed at other hospitals may be indicators of fraudulent practices as well.

In procurement, five of the DOHFW’s seven design consultant procurements exhibited indicators that the DOHFW manipulated bidders’ technical evaluations to determine tender results and/or create the appearance of competition. Four of the DOHFW’s five CMC procurements exhibited similar indicators that the DOHFW manipulated bidders’ technical evaluations to shape tender results. Moreover, the CMC-conducted contractor procurements were marked by four indicators of fraud and bid rigging: (1) extremely low competition; (2) the frequent disqualification of low bidders, which resulted in 25 percent of contracts not being awarded to the lowest bidder; (3) contract prices that exceeded cost estimates in 80 percent of tenders; and (4) multiple contractors that repeatedly subcontracted their work without PMC approval.

A. Indicators of Fraud in Civil Works Implementation

The DIR visited 55 hospitals that were physically upgraded by the OHSDP. In February 2006, the PMC informed the Bank that the civil works at 92 percent of all project hospitals—and 82 percent of the hospitals visited by the DIR (45 of 55)—were complete. At 69 percent of the hospitals visited by the DIR (38 of 55), the CMCs had certified in writing that the civil works had been completed in accordance with the approved plans and specifications. However, contrary to these representations and certifications, at 93 percent of the hospitals that it visited (51 of 55), the DIR observed significant civil works deficiencies—such as work not started or finished, crumbling ceilings, molding walls, and frequently failing electrical systems—that suggested that the civil works were either incomplete or not performed to required specifications.

In addition, four of the sites visited by the DIR were locked shut and unused, and an additional 12 sites had extensions or other portions that were locked shut and unused. The reasons for this non-use varied from incomplete work that was not handed over to the medical officer for use, to the local medical officer’s refusal

151 See, e.g., Handing Over Report of OHSWP Work, DHH Angul (Oct. 31, 2006) (certifying that work was “completed and handed over … and that there have been no material deviation[s] from the sanctioned plan and specification other than those sanctioned by competent authority”).
152 The four hospitals where the DIR did not observe severe civil works problems were Capital Hospital in Bhubaneswar, DHH Jarsuguda, CHC-II Loisinga, and CHC-I Sohella. The DIR was unable to view all of the civil works performed at Capital Hospital, and its assessment of the state of the hospital’s civil works is based solely on those works that were observed.
to accept what he considered to be substandard work, to a lack of functional water and power, to insufficient numbers of hospital staff. But in all 16 of these cases, the locked and unused spaces were stocked with EIF and other medical supplies.

There are many possible reasons for these civil works implementation failures, including a lack of local capacity or poor contractor performance. Further, the completion certificates signed by the CMCs sometimes stated that only portions of the planned works were complete. To evaluate whether the implementation problems observed by the DIR could be considered indicators of underlying fraud, the DIR examined construction records for the 21 hospitals exhibiting the most serious implementation problems. These hospitals spanned all five CMCs, and the DIR's document review found that 10 of them exhibited strong indications of fraud by at least the CMCs (the documentation for the remaining hospitals was inconclusive on this issue). Therefore, at least some of the many problems observed at the visited hospitals are indicators of fraud.

1. **The CMCs and the DIR's Review of Their Work**

Five CMCs worked on the OHSDP: K.K. Agrawal & Associates (K.K. Agrawal); MECON Ltd. (MECON); the Orissa Construction Corporation, Ltd. (OCCL); the Orissa Industrial Development Corporation (IDCO); and Senior Consultants Advising Group (SCAG). Their civil works implementation responsibilities included:

- Monitoring and supervising construction activities;
- Ensuring the quality of work and materials, which included daily checks of the strength of concrete and the composition of cement mortar and render;
- Providing physical and financial progress reports to the PMC;
- Certifying the completion of the works, which included inspecting the works and any needed remedial works; and
- Certifying contractors' interim and final bills and recommending their payment.\(^{153}\)

The DIR's review of civil works encompassed 55 hospitals supervised by all five CMCs in 24 different districts, on which the OHSDP spent INR 1.48 billion (USD 33 million).

2. The DIR Observed Widespread Civil Works Problems

The civil works problems observed by the DIR fall into seven categories: (1) construction and renovation problems; (2) water damage; (3) electrical problems; (4) water supply, drainage, and sewerage problems; (5) locked and unused facilities; (6) medical waste and containment problems; and (7) hospital maintenance problems. Details regarding their frequency and severity are presented below.

Construction and Renovation Problems. Of the 55 sites the DIR visited, 98 percent (54 of 55) exhibited problems with new construction and 93 percent (51 of 55) exhibited problems with renovations. Problems with fixtures, such as windows, doors, and their frames, were identified at 62 percent of the visited hospitals (34 of 55), while problems with cement render (or plaster) and concrete quality were found at 71 percent of the visited hospitals (39 of 55).

Many of these hospitals were built several years before the DIR’s visit, and the DIR expected them to exhibit some deterioration because of the extreme heat and rain that occurs in Orissa. However, a civil engineer assisting the DIR stated that the observed deterioration was so great that relatively new buildings appeared to be over 30 years old, thus suggesting underlying construction problems. The engineer further estimated that the poor-quality materials and work observed may shorten the useful lives of these buildings by as much as 50–75 percent. In total, the OHSDP spent approximately USD 13.1 million on the construction and renovation of these sites.

The following are examples of the types of construction and renovation problems observed by the DIR:

- At SDH Athgarh, the steel windows, window frames, window grates, and door frames were rusting. The civil engineer assisting the DIR concluded that such rusting indicates the contractor’s failure to follow project technical specifications by protecting the metal window-work with three coats of paint, in addition to one coat of antitrust paint. (See Photograph 1 on page 277.)

- At AH Baramba, the DIR observed construction equipment, supplies, and debris littering the area around the old hospital premises. Medical officials informed the DIR that the contractor abandoned its renovation work in

---

154 Eight contractors worked on more than one hospital visited by the DIR. The DIR reviewed the problems identified at these hospitals to determine whether these eight contractors exhibited particular patterns of problems, but no such patterns existed in this group of contractors.

155 See, e.g., Jajpur Road Bill of Quantities, item 6.2; Bolagarh Specifications, cl. 1.7.
At AH Bolagarh, many walls exhibited cracks and discoloration indicative of water damage and mold. Joints between the old and new buildings appeared improperly sealed and exhibited signs of water leakage. The operating theater was locked and unused, and the cement render on the walls in the operating theater and labor suite was cracking and crumbled easily upon contact. A concrete ramp wide enough to accommodate a motor vehicle had been constructed to the roof for no clear purpose. Project documentation suggests that the OHSDP never fully funded the expansion of the hospital to accommodate 30 beds; rather, an expansion of the wards for 10 beds was to be funded by another source—BMS—and, when this funding did not materialize, the extra space was not provided.  

At SDH Kuchinda, some hallways and rooms in the new building extension had cracks in the walls that were long, deep, and appeared to be causing render to fall out in large pieces. The new operating theater had not been completed and was unused. Similarly, some ceilings in the new section of the hospital remained unfinished, and the exposed steel rebar was rusting. Construction debris, including a rusting concrete mixer, was left on the site. (See Photograph 3 on page 278.)

At AH Nimapara, medical officials told the DIR that the building leaked severely during the monsoon season. The DIR also observed large cracks in the cement render near the front of the hospital. According to the civil engineer assisting the DIR, these cracks—which formed at the interface between the wall brickwork and the concrete support columns and beams—are caused by excessive shrinkage of the brickwork. The project specifications provided that: (1) prior to installation, the bricks used in the hospitals were to be soaked in water for six hours; (2) mortar of a specific cement-to-sand ratio was to be used; and (3) brickwork was to be cured by spraying walls with water three times a day for 10 days and then twice a day for three weeks. The engineer stated that the cracks observed by the

---

156 Area Hospital Advisory Committee, Bolagarh letter to Chairman, Orissa Health System (Aug. 17, 2001) (The letter notes the lack of 30 beds, and an inscription from another author states that “this was programmed to be completed out of BMS II, which was dropped. We may process it for Ph II.”); OHSDP Project Director letter to Khurda CDMO (May 21, 2002) (“It was approved by the Project Board on 31.07.1999 that out of the 30 beds of Bolagarh, AH wards for 10 beds shall be constructed from BMS funds by IDCO. Hence the same has not been provided for by OHSDP.”).

157 See, e.g., Jagatsinghpur Specifications, cl. 1.8., and Bill of Quantities, items 10 and 11.
DIR likely were caused by contractors who ignored these specifications to save costs; as a result, their bricks absorbed water from the surrounding mortar, the brickwork shrank, and the walls cracked.

At CHC Soro, the upper walls and ceilings of the new building exhibited water damage from leaks, but the old building—which officials stated was built in 1947—had no similar problems. In addition, renovations to the health center’s old diarrhea ward were not performed. Despite being surrounded on three sides by in-use portions of the health center, it sat filled with EIF waste and appeared to be slowly decaying. (See Photograph 4 on page 278. For a further example of observed construction problems, see Photograph 5 on page 279.)

Water Damage. The DIR observed water damage at all of the 55 hospitals that it visited. This water damage ranged from visible mold on the interior and exterior of walls and on ceilings to cement rendering falling from walls because dampness penetrated beneath it.158

The following are examples of the types of water damage problems observed by the DIR:

- At CHC-II Garposh, the DIR observed very large cracks in the walls and pillars throughout the hospital that appear to have been caused by water penetrating the concrete. (See Photograph 6 on page 279.)

- At AH Kesinga and CHC-II Ullunda, the civil engineer assisting the DIR observed that the concrete and cement rendering used at the hospital likely included too little cement and/or was not cured long enough—both practices violate project technical specifications and are used by contractors to cut costs.159 As a result, walls and ceilings were cracking, and tiles were falling off of the newly constructed walls. The engineer observed that some of the concrete was so weak—for example, near the surface water drain—that large pieces could be cut away with a pocket knife. (See Photographs 7 and 8 on page 280.)

- At CHC-II Pottangi, the hospital’s exterior walls—and several interior walls—exhibited significant amounts of discoloration from mold. Medical

---

158 Because these hospitals mostly were in use, the DIR did not take concrete samples for laboratory testing. This would, however, be done as part of any follow-up investigations.

159 Concrete and cement render are composed of a combination of cement, water, and aggregate like rock, sand, or gravel. The concrete mix was supposed to contain one part cement, three parts sand, and six parts aggregate, and was supposed to be cured for seven days. See, e.g., Baragarh Bill of Quantities, item 94.
officials also informed the DIR that the protective canopy over the open sides of a downward-sloping walkway between the outpatient unit and the patient wards and operating theater was too small; as a result, during the monsoon season rain fell onto the walkway, flowed into the outpatient unit and operating theater, and flooded them.

- At SDH Talcher, medical officials informed the DIR that the roofs of both the new building and renovated parts of the old building leaked significantly. The DIR observed discoloration from water damage and mold on these buildings’ ceilings and walls. The civil engineer assisting the DIR stated that these roof leaks were caused by contractors’ failure to use the specified type of concrete and waterproofing methods in order to save costs. (For a further example of observed water damage, see Photograph 9 on page 281.)

*Electrical Problems.* The DIR observed problems with the electrical systems at 93 percent of the hospitals that it visited (51 of 55), though the severity of the problems varied among them. Problems with diesel generators were identified at 71 percent of the hospitals visited (39 of 55): generators were not supplied to two hospitals and were delivered but not installed at 37 other hospitals. Similarly, the DIR found that the transformer was not installed in 11 hospitals and was not supplied to two other hospitals.

The following are examples of the types of electrical problems observed by the DIR:

- At CHC-II Kanpur, CHC-II Rairakhol, and CHC-II Charmal, the generator was not installed. Medical officials informed the DIR that during the hospitals’ frequent power outages they treated patients and delivered babies by lamplight.

- At SDH Kamakhyanagar, the hospital did not receive a generator, and while its transformer was properly installed and connected to the electrical grid, it was not connected to the hospital. Instead, the transformer provided power to neighboring houses. The hospital went without electricity.

- At CHC-I Loisinga, power was connected and building wiring appeared generally well installed. However, the DIR noted that some fixtures were missing, and medical officials stated that the power supply was unreliable and, as a result, the operating theater often could not be used.
At AH Podagada, medical officials informed the DIR that power was connected and working reasonably well. However, some fuse boxes were uncovered, and the power supplied was not three-phase power and could not power some OHSDP-provided equipment. The DIR observed that the hospital’s wiring was well executed but that it lacked a generator. (See Photograph 10 on page 281.)

At DHH Sundargarh, some internal wiring appeared improvised and possibly dangerous. In addition, main power lines were not placed in trenches and instead lay bare on the ground. Correspondence from the district’s junior engineer stated that this was “dangerous for human life, cow, dogs, and all animals who are roaming inside campus … at any moment a fatal electrical accident will happen.”160 (The DIR observed a similar situation at CHC-II Charmal.) Medical officials also told the DIR that the hospital’s three-phase electrical power was either non-functional or defective. As a result, they could not use the hospital’s maternity ward and the room was kept locked. (See Photograph 11 on page 282.)

At AH Umarkote, the hospital’s entire electrical system was renovated, but medical officials told the DIR that they routinely experience low-voltage issues that prevent them from using their medical equipment. The DIR observed many uninstalled electrical items, such as wires hanging from the ceiling and fixtures sitting uninstalled. Some electrical boxes were blackened by smoke, indicating that faulty wiring had caused them to overheat. The hospital received a generator, but it sat unconnected in a storage room. (For further examples of observed electrical problems, see Photographs 12 and 13 on pages 282–283.)

Water Supply, Drainage, and Sewerage Problems. The DIR observed water supply problems at 60 percent of the hospitals that it visited (33 of 55) and drainage issues at 69 percent of the hospitals that it visited (38 of 55). The DIR also observed sewerage issues at 69 percent of the hospitals visited (38 of 55), though at nine of these hospitals the only observed problem was that ventilation pipes did not extend two meters above the roof level, as required under Indian standards and project specifications.161 Drainage and sewerage issues were often a contributing factor to the water damage uniformly observed at the hospitals.

160 Sundargarh Junior Engineer letter to Sundargarh Chief District Medical Officer (Mar. 8, 2007) (photographed during site visit).
161 The civil engineer assisting the DIR made this observation. See IS 2064; Jagatsinghpur Specifications for Sanitary Fixtures, para. 1.
The following are examples of the types of water supply, drainage, and sewerage problems observed by the DIR:

- CHC-I Banapur had no functioning toilets, and the new bathrooms constructed adjacent to the patient wards did not have toilets, fixtures, or plumbing. The hospital’s septic tanks were not covered.

- At DHH Dhenkanal, there were no working sinks in the new hospital building and no water in the wards. The hospital obtained much of its water from a hand-powered pump in the front courtyard. However, several newly installed toilets that did receive water leaked severely. The new water tank was not covered, and the hospital’s exterior drainage system was not completed. Medical staff also informed the DIR that this exterior system did not drain properly, and the DIR observed that it was used as a toilet and waste disposal area, which attracted roaming livestock and mosquitoes. (See Photograph 14 on page 283.)

- At AH Jajpur Road, the exterior water drainage system was designed to connect with the road’s drainage system. However, the road was higher than the hospital, and medical officials told the DIR that as a result water from the road drainage often flooded the hospital.

- At SDH Jeypore, some of the bathrooms appeared to lack running water, and those rooms’ sinks and toilets did not have fixtures or plumbing attached to them. Problems with the hospital’s sewage system caused sewage to pool in ponds around the building, to overflow several toilets, and to spill out into the nearby hallways. This created a stench that permeated the hospital. In addition, several other toilets were leaking water from their bases. (See Photograph 15 on page 284.)

- At CHC-I Mathili, the DIR observed that new water tanks had been installed. Medical officials informed the DIR that the health center’s water supply was generally satisfactory, but the bathroom in one of the wards lacked running water and, as a result, patients had to go outside to defecate.

- At DHH Puri, medical officials told the DIR that the new hospital’s sewage system never functioned. As a result, sewage backed up into and around the hospital, and whole wards were flooded with sewage and locked. Medical officials stated that they were moving patients from the new, flooded hospital building to the old building to avoid the smell and health risks.
associated with the sewage. (See Photograph 16 on page 284. For a further example of observed drainage problems, see Photograph 17 on page 285.)

Locked and Unused Facilities. In its supervision mission documents, the Bank emphasized that the non-use of project facilities and equipment “is a serious matter for us.”162 The DIR observed that at four locations, whole hospitals built with OHSDP funds were locked shut and remained unused. These hospitals, which were not among the two cancelled by the PMC, were:

- DHH Berhampur;
- DHH Khurda;
- CHC-II Bijipur; and
- CHC-II Majhapada.

The DIR also observed that at 12 hospitals portions of the buildings were locked and unused. For example, at DHH Sundargarh, a large new maternity wing was not completed and sits locked and unused. Similarly, at DHH Baragarh, the OHSDP-funded operating theater suite was not used. The DIR could view it only through a window in its locked door. (See Photographs 18–21 on pages 285–287.)

Medical Waste Containment and Disposal Problems. The DIR observed problems with the construction and use of medical waste containment areas at 74 percent of the hospitals that it visited (41 of 55). The waste containment areas at two hospitals had not been constructed, while staff at other hospitals reported that they were not trained in the use of these areas. These failures are not strictly the result of fraud and corruption, but they indicate an implementation failure that may hamper the sustainability of the project’s development goals. They also are consistent with concerns about waste management implementation that the Bank raised in its supervision mission reports.163

The following are examples of the types of waste disposal problems observed by the DIR:

- At DHH Jajpur, the waste containment area pits were not constructed fully, and the waste area’s concrete pad and walkways were crumbling underfoot, suggesting that they had been constructed with poor-quality concrete. The area lacked a functioning water supply, the metal cover on

---

the sharps pit was rusting, and the building built to house the waste auto-
clave and shredder appeared to have not been used. Further, hospital staff
had piled used syringes and needles outside or on the sills of the windows
in the female ward.

- At CHC-II Kanpur, medical staff appeared to be using the waste manage-
ment area properly, though it lacked running water and an access road for
trolleys of waste. (Medical officials stated that they carried waste to the site
in buckets.)

- At CHC-II Manamunda, medical officials were depositing waste into an
open well rather than the completed waste containment area. The civil
engineer assisting the DIR expressed concern that this practice could pol-
lute the local water supply. (See Photograph 22 on page 287.)

- At DHH Puri, medical officials stated that the waste containment area was
no longer used because it was built immediately next to previously exist-
ing homes and the people who lived there complained when it first was
used.

- At AH Umarkote, medical waste was scattered around the hospital
grounds. The DIR saw animals from the village rooting through the
waste for food and barefoot children playing near piles of used bandages
and syringes. (See Photographs 23 and 24 on page 288. For a further
example of observed medical waste disposal problems, see Photograph
25 on page 289.)

**Maintenance Problems.** While not an indicator of fraud and corruption, the DIR
observed issues—often serious ones—related to facilities maintenance at almost
every site it visited. Examples of poor maintenance included mattresses and bed-
ding that were ripped and soiled, rain water drains that were clogged with waste,
bathroom stalls that overflowed with human refuse, and holes in ceilings that were
never repaired.

Project documents indicate that despite Bank awareness of the importance of
facilities maintenance, the OHSDP funded only a portion of the needed mainte-
nance, and the PMC never utilized these funds because it lacked a plan for doing so.
The resulting lack of maintenance has caused accelerated deterioration of the hospitals that may compromise the sustainability of the project’s development goals.

From the outset, the Bank acknowledged that maintenance of the OHSDP’s renovated hospitals was critical to the project’s long-term success.\textsuperscript{164} As a result, the Project Agreement required the Government of Orissa to maintain the staff, authority, and funding necessary to ensure that both the civil works and new medical equipment were properly maintained.\textsuperscript{165} The PMC’s engineering unit, in collaboration with project consultants and CDMOs, was responsible for developing hospital maintenance manuals and training local staff.\textsuperscript{166} But the PMC did not allocate any funds specifically for hospital or equipment maintenance.

The PMC developed a long-term hospital maintenance plan in 2004, but it never implemented the plan.\textsuperscript{167} The PMC attributed this failure to a lack of funds, claiming that the project’s maintenance funds were included in the USD 24 million reallocated to the National Polio Eradication Project.\textsuperscript{168} Consistent with this claim, the Bank itself identified savings in maintenance expenses as a source of the USD 24 million in OHSDP savings, and in September 2005 the OHSDP Project Director requested a reallocation of USD 25 million back to the project for use in hospital maintenance, among other things.\textsuperscript{169} The Bank denied this request, and maintenance was later cited as contributing to a “moderate risk” that the OHSDP’s development outcomes would not be sustained.\textsuperscript{170} The DIR’s implementation findings confirm the significance of this risk and underscore the importance of maintenance in civil works projects.

\textbf{B. An In-Depth Review of Civil Works Documents Revealed That Implementation Failures May Be Indicators of Fraud}

The DIR reviewed documents produced during the civil works activities at 21 OHSDP-funded hospitals and compared them with its site visit observations. In almost half of these hospitals (10 of 21) the DIR observed significant civil works problems when the documents contained certifications that works were completed

\begin{itemize}
  \item \textsuperscript{164} OHSDP PAD, p. 8.
  \item \textsuperscript{165} Project Agreement, secs. 2.01(b) and sched. 2, paras. 1–15.
  \item \textsuperscript{166} OHSDP PIP, pp. 143–44 and 147–48.
  \item \textsuperscript{167} May 2004 Aide-Mémoire, pp. 3–4 (plan in development); September 2004 Aide-Mémoire, p. 3 (plan developed); July 2005 Aide-Mémoire, p. 4 (no implementation details provided); December 2005 Aide-Mémoire, pp. 5–6 (maintenance deficient); March 2006 Aide-Mémoire, p. 4 (maintenance deficient).
  \item \textsuperscript{168} July 2005 Aide-Mémoire, p. 4.
  \item \textsuperscript{169} November 25, 2002 Project Status Report (Sequence # 12), Project Status; Project Director M. Panigrahi letter to DEA Director A. Tiwari (Sept. 5, 2005).
  \item \textsuperscript{170} OHSDP ICR, p. 23.
\end{itemize}
and performed consistent with project specifications. In these cases, the inconsistency between the DIR’s findings and the certification and payment records indicates that the supervising CMC may have committed fraud by either certifying incomplete works as complete or authorizing payment for deficient works. The details of these 10 cases are as follows:

1. **DHH Angul**

On April 23, 2002, IDCO signed a contract with the Orissa Small Industries Corporation Ltd. (OSIC) to construct 1,970 square meters of new construction and perform other repair and renovation work at DHH Angul.\(^{171}\) The work was supposed to be completed by April 24, 2003, but OSIC’s work at the site was delayed so significantly that in 2005—two years after the work was supposed to be complete—the PMC threatened OSIC with invocation of contractual remedies.\(^{172}\)

In January 2006, the PMC wrote to OSIC and stated that “there has been very little progress in the last two years” and “[a]t this rate of progress, OPEC [OSIC’s subcontractor] may not be able to complete even one unit before 31.03.06.”\(^{173}\) The PMC reiterated these same concerns in a letter of February 17, 2006, suggesting that work at the site still had not progressed.\(^{174}\)

Yet on October 11, 2006, IDCO certified that the work on the site was “completed and handed over … and that there have been no material deviation[s] from the sanctioned plan and specification other than those sanctioned by competent authority.”\(^{175}\) Thus, after almost three years of delays, IDCO reported that OSIC had finished its civil works activities in eight months.

According to the building details sheets accompanying this certification, the completed hospital had:

- An extension to the major operating theater;
- An extension to the hospital ward;
- Extensions to the male and female toilets;
- Two new quarters for hospital staff; and

---

\(^{171}\) Contract between OHSDP (IDCO) and Orissa Small Industries Corporation, Ltd., pp. 1–2 and 6 (Apr. 23, 2002) (Bates 22345–47 and 22351).

\(^{172}\) Ibid., Bates 22341; Project Director M. Panigrahi letters to OSIC Manager (June 30 and Dec. 28, 2005).

\(^{173}\) Project Director M. Panigrahi letter to OSIC Manager (January 17, 2006).

\(^{174}\) Project Director M. Panigrahi letter to OSIC Manager (February 17, 2006).

\(^{175}\) Handing Over Report of OHSDP Work, DHH Angul (Oct. 11, 2006).
The certification noted that some areas leaked during the monsoon season and stated that IDCO would remedy the defects. The handover documents also noted that the value of the work had decreased from INR 13.5 million (USD 299,500) to INR 10.5 million (USD 233,000), though the documents did not explain why.

The DIR visited DHH Angul on April 4, 2007—approximately six months after the hospital’s handover. Despite IDCO’s certification of the works’ completion to specifications, the DIR observed the following civil works problems at the hospital:

- The newly extended major operating theater had cracks in its walls, large areas of mold on its ceiling, and one wall was left as bare brick rather than covered with render and tile. Hospital corridors also had cracks, some of which appeared to be long, deep, and causing pieces of render to fall out of the wall. (See Photograph 26 on page 289.)

- Walls and ceilings in the newly extended hospital ward exhibited discoloration indicative of water damage. Some walls and ceilings had large patches of mold on them. (See Photographs 27 and 28 on page 290.)

- Sewage from the ward bathrooms was overflowing into the hallways, suggesting improper connection of the new bathrooms to the sewage system. Several of the bathroom stall fixtures were either visually not solidly affixed to the wall or not installed at all. Uninstalled sinks were piled on the bathroom floor. (See Photograph 29 on page 291.)

- The majority of the electrical boxes in the renovated wing were open, unattached to the walls, and contained tangled wiring. The site’s generator was installed and working but was not housed in the generator building. Instead, a hospital worker was using that building as a residence.

- The OHSDP provided a water drainage system for the new hospital building but not the old one. As a result, the old hospital building still flooded during heavy rains. The CDMO stated that this flooding could be up to knee high in depth.

The significant inconsistency between IDCO’s completion certification and the DIR’s site visit observations is an indicator that IDCO’s certification was fraudulent.

---

176 Building Details Sheet, pp. 1–2 (Oct. 11, 2006).
179 Collector and District Manager N.B. Dhal letter to DOHFW Principal Secretary M. Gupta (July 1, 2002).
2. **CHC-I Balipatna**

On July 22, 2001, K.K. Agrawal signed a contract with Sri Baishnab Charan Patra (SBC Patra) to construct 612 square meters of new hospital buildings, construct 114 square meters of residential quarters, and renovate parts of the health center, including its electrical systems.\(^{180}\) The work was supposed to be completed by May 19, 2002.\(^{181}\) The hospital’s civil works were slightly delayed: in a letter of December 5, 2002, K.K. Agrawal noted that work was delayed and instructed the contractor to complete the work by December 15.\(^{182}\)

On March 15, 2004, K.K. Agrawal certified that the civil works at the hospital—which had “been carried out in accordance with the specifications, drawings & relevant I.S. Code and as per terms and conditions specified in Contract/Agreement”—had been completed on October 23, 2002, and taken over by the Medical Officer in Charge on January 20, 2003.\(^{183}\) In a letter of July 4, 2003, the hospital’s Chief Medical Officer also stated that the works were complete, satisfactory, and had been used by the hospital since January 2003.\(^{184}\) The only site variations noted in the documents are repairs of unanticipated pre-project site problems, such as faulty plumbing and a non-functional transformer.\(^{185}\) Documents indicate that as of January 2006, SBC Patra was paid INR 6.4 million (USD 142,000), or 92 percent of its contract value.\(^{186}\)

K.K. Agrawal’s October 2002 completion certification is inconsistent with its own December 2002 correspondence stating that works were not complete. Further, both K.K. Agrawal and the Chief Medical Officer’s statements that the works were satisfactory and up to specification are inconsistent with subsequent project correspondence indicating problems at the hospital:

- In a January 2005 letter, K.K. Agrawal instructed SBC Patra to repair faulty wiring causing a lack of electricity in the patient wards and smaller operating theater.\(^{187}\) In March 2005, the PMC instructed SBC Patra to repair both

---

\(^{180}\) Contract between OHSDP (K.K. Agrawal) and SBC Patra (July 22, 2001) (Bates 47904–10).


\(^{184}\) CHC-I Balipatna Chief Medical Officer letter to K.K. Agrawal (July 4, 2003) (Bates 7079).


\(^{186}\) Details of Payments Made in R/A Bills for Balipatna (Jan. 28, 2006).

this problem and a defective tube well that caused frequent disruption to
the hospital’s water supply.\textsuperscript{188}

- In June 2005, a joint K.K. Agrawal–PMC inspection identified a number
of problems at the hospital, including cracks, water leakage, and water
damage in the operating theaters and labor room; a lack of a proper drain-
age system, including missing rainwater pipes; and electrical problems.\textsuperscript{189}

As of September 2005, these problems remained unrepaired.\textsuperscript{190}

The DIR visited CHC-I Balipatna on April 15, 2007—approximately five years
after the civil works at the hospital were certified complete. Contrary to K.K.
Agrawal’s certification, the DIR observed civil works problems at the hospital that
were consistent with those identified in project correspondence. They included the
following:

- The ceilings of the new operating theater and labor and delivery suite
  leaked so badly that the resulting water damage had caused portions of
  the ceiling to fall in large pieces onto the new operating tables and delivery
  beds. Local medical officials stated that they had ceased using the suite
  because they feared that the ceiling was going to collapse. (See Photogra-
  phs 30 and 31 on pages 291–292.)

- The sheet metal roofs over the stairwell and some laboratory space had
  visible gaps and holes that allowed rainwater to enter the building directly.
  These leaks appeared to have caused patches of water damage and mold
  in many locations in the stairwell and nearby hallways. The rainwater also
  fell on, among other things, an OHSDP-funded x-ray machine. (See Pho-
  tograph 32 on page 292.)

- The exterior of the renovated building appeared water-damaged and dis-
  colored by mold.

- The staff quarters renovations appeared incomplete and lacked running
  water. The exterior walls of the quarters exhibited large cracks extending
  along their entire height. (See Photograph 33 on page 293.)

- New wiring hung loosely from the ceiling at many points in the hospital,
  and a number of light fixtures appeared to be missing. The hospital’s gen-

\textsuperscript{188} OHSDP Project Director letter to SBC Patra (Mar. 31, 2005). K.K. Agrawal also instructed SBC Patra to cor-

\textsuperscript{189} OHSDP Project Director letters to K.K. Agrawal (July 22, 2005) (Bates 7056–57).

\textsuperscript{190} OHSDP Project Director letter to K.K. Agrawal (Sept. 27, 2005) (Bates 7052); K.K. Agrawal letter to SBC
Patra (Sept. 29, 2005) (Bates 7051).
erator building was not fully constructed, and the generator itself was not installed. Instead, it was stored in a new ward for female patients.

- The waste containment area was not fully constructed and was unused.

The significant inconsistencies between K.K. Agrawal’s completion certification, its subsequent correspondence, and the DIR’s site visit observations are an indicator that K.K. Agrawal’s certification was fraudulent.

3. **DHH Bhadrak**

On October 11, 2002, MECON signed a contract with Mahendra Swain (Swain) to construct 2,876 square meters of new hospital space and renovate portions of the old hospital building, including its electrical systems.\(^{191}\) The work was supposed to be completed on January 10, 2004, but because of payment problems and a lack of detailed site drawings the PMC extended Swain’s deadline to June 30, 2005.\(^{192}\) MECON’s site supervision was also considered inadequate, and project documents suggest that the PMC replaced MECON with K.K. Agrawal in 2005.\(^{193}\)

Swain’s work on the hospital was criticized frequently. For example:

- In June 2003, the PMC identified the firm as one of 13 contractors that had “deliberately caused time overruns and abandoned work sites” by “offloading their works to subcontractors without the prior approval of OHSDP and without commensurate criteria stipulated in bidding conditions.”\(^{194}\)

- In late August 2003, a joint PMC–World Bank inspection reported that almost no work had been performed at the site between January and June 2003 and that the contractor was using defective concrete.\(^{195}\) The same implementation problems were observed in December 2003.\(^{196}\)

- In February 2005, the PMC threatened to rescind Swain’s contract because of construction delays and poor-quality work.\(^{197}\) In September 2005, the

---

\(^{191}\) Contract between OHSDP (MECON) and M/s Mahendra Swain, pp. A2–A3 and B2–B3 (Oct. 11, 2002).

\(^{192}\) Ibid., pp. B2–B3; Mahendra Swain letter to OHSDP Project Director (Dec. 8, 2003) (Bates 7503–04); Grant of Extension of Time (undated) (Bates 7446).

\(^{193}\) OHSDP Project Director letter to MECON (Jan. 16, 2004) (Bates 7499) (MECON supervision inadequate); OHSDP - K.K. Agrawal Joint Inspection Report (Sept. 17, 2005) (Bates 7532); OHSDP Project Director letter to K.K. Agrawal (undated) (Bates 7581) (referring to MECON as the prior CMC).

\(^{194}\) OHSDP Project Director letter to DOHFW Commissioner-cum-Secretary (June 16, 2003) (Bates 7510–11).


\(^{196}\) OHSDP Project Director letter to MECON Chief Construction Manager (Jan. 16, 2004) (Bates 7499).

PMC instructed Swain to hire additional staff and procure additional materials in order to expedite its progress.198

On March 29, 2006, K.K. Agrawal told the PMC that there were defects in Swain’s construction and electrical work and recommended withholding INR 800,000 (USD 17,800) until they were corrected.199 But in a letter of March 31, 2006, K.K. Agrawal repeated Swain’s claim that the defects were completed, “except for the PH work not done because of the inability to charge the transformer.”200 The letter does not state that K.K. Agrawal inspected and approved these last-day repairs.

On March 31, 2006—the day the OHSDP closed—K.K. Agrawal and the hospital’s Chief Medical Officer signed a completion certificate stating that “the work has been completed in accordance to approved plan and specifications and handed over to the Medical Officer in-charge[.].”201 The certificate contained no exceptions to its statement of completion and noted no defects in the civil works. No document states that the scope of the civil works was modified, and no document indicates how much Swain was paid for its work, though its contract’s stated value was INR 24.9 million (USD 554,000).202

The March 31, 2006, completion certificate is inconsistent with K.K. Agrawal’s March 31 letter that stated that some works were not complete because the hospital’s transformer was not “charged,” i.e., connected to the power grid. It also is inconsistent with a letter from Swain dated June 19, 2006—three months after the completion certificate was signed—informing the PMC that the operating theater was complete and ready for inspection.203

During its site visit, Bhadrak medical officials told the DIR that the construction actually was handed over in February 2007, though no documentation confirms this statement.

The DIR visited DHH Bhadrak on April 24, 2007—approximately one year after the civil works at the hospital were certified as complete. Contrary to this certification, the DIR observed the following civil works problems at the hospital:

198 OHSDP Project Director letter to Mahendra Swain (Sept. 23, 2005) (Bates 7530).
202 Contract between OHSDP (MECON) and Mahendra Swain, pp. A2–A3.
203 Mahendra Swain letter to OHSDP Project Director (June 19, 2006) (Bates 7597.003).
Medical officials told the DIR that the hospital’s renovated second floor leaked when it rained. Consistent with this statement, the DIR observed multiple cracks and areas of wall discoloration indicative of water damage. (See Photograph 34 on page 293.)

Medical officials stated that the hospital’s new septic tanks were too small for its volume of patients. Consistent with this statement, the DIR observed two or three washrooms that were overflowing with backlogged sewage. (See Photograph 35 on page 294.)

The contractor did not connect running water to the ground floor, so the medical officials moved the maternity ward to the first floor. Medical officials stated that they experienced great difficulty transporting pregnant women and women in labor up a flight of stairs to the relocated ward. See (Photograph 36 on page 294.)

The cable connecting the hospital’s new generator frayed shortly after installation, leaving the hospital reliant on older backup generators. In addition, one of the OHSDP-supplied external electrical switchboxes was poorly connected to the hospital’s electrical cables, leaving bare wire connections exposed to weather. (See Photograph 37 on page 295.)

The significant inconsistencies between K.K. Agrawal’s completion certification, subsequent project correspondence, and the DIR’s site visit observations are an indicator that K.K. Agrawal’s certification was fraudulent.

4. **DHH Deogarh**

On May 21, 2003, IDCO signed a contract with Sri Pramod Kumar Rath (Rath) to construct and renovate 1,440 square meters of the hospital and medical officials’ quarters, including their electrical systems. The work was supposed to be completed on April 6, 2004, but delays at the site began almost immediately and persisted for years.

On May 23, 2002, IDCO informed the PMC that the design consultant had not yet provided drawings for the site. On July 29, 2003, IDCO wrote to Rath and observed that it still had not yet begun work on the hospital. In November 2003, the PMC terminated Rath’s contract because no work had been done in six-and-

---

204 Contract between OHSDP (IDCO) and Sri Pramod Kumar Rath, p. 1 and Contractor’s Bid (May 21, 2003) (Bates 27084 and 27089).
205 Ibid., Bates 27082.
206 IDCO letter to OHSDP Project Director (May 22, 2003) (Bates 3562).
207 IDCO letter to Pramod Kumar Rath (July 29, 2003) (Bates 3561).
a-half months, but IDCO cancelled the rescission when Rath attributed its slow progress to payment delays on its four other OHSDP contracts and recommitted, in writing, to completing its work.208 After continued delays in 2004 and 2005, on June 26, 2005, the PMC notified Rath that its contract could be terminated because the firm had billed only 14 percent of the contract’s value and its works were 16 months overdue.209 The PMC did not, however, resort to this termination.

In February 2006, Deogarh elected officials informed the DOHFW that the civil works at Deogarh were still progressing very slowly and that no one appeared to be actively supervising Rath’s progress.210 But on July 14, 2006, IDCO submitted Rath’s final bill to the PMC and recommended its payment, subject to deductions for deviations.211 On August 31, 2006—one year after the PMC’s second termination threat and two years after the civil works were due to be complete—Rath and the Assistant District Medical Officer (ADMO) signed a handover check slip representing that all civil works were “complete per stated plans.”212 The slip did not include any exceptions or note any deficiencies, and documents do not state how much Rath was paid for its work. The documents produced to the DIR did not contain a completion certificate signed by IDCO.

The DIR visited DHH Deogarh on April 27, 2007—approximately eight months after the works were reported complete. Despite Rath’s representation, the DIR observed the following civil works problems at the hospital:

- Construction of the new warehouse and kitchen block was not started.
- Renovations to the labor and delivery rooms had not been completed and they lacked flooring, tiling on the walls, and windows and doors. The renovated x-ray room also had not been completed. (See Photograph 38 on page 295.)

208  IDCO letter to OHSDP Project Director (Oct. 23, 2006) (Bates 3551); OHSDP Project Director letter to Pramod Kumar Rath (Nov. 15, 2003) (Bates 3552); Pramod Kumar Rath letter to IDCO (Dec. 12, 2003) (Bates 3542); OHSDP Project Director letter to Pramod Kumar Rath (Dec. 17, 2003) (Bates 3540).
209  Deogarh Chief District Medical Officer letter to OHSDP Project Director (May 9, 2004) (Bates 3513) (no progress); Deogarh Biju Janta Dal President letter to Orissa Minister of Health (May 25, 2004) (Bates 3507) (no progress for three months); IDCO letter to Pramod Kumar Rath (June 11, 2004) (Bates 3505) (work site deserted since April); OHSDP Project Director letter to Pramod Kumar Rath (Feb. 16, 2005) (Bates 3481–82) (threatening remedial actions for failure to perform); OHSDP Project Director letter to Pramod Kumar Rath (June 25, 2005) (Bates 3475–76) (threatening termination).
210  Deogarh Collector letter to DOHFW Principal Secretary (Feb. 10, 2006) (Bates 3528).
211  IDCO letter to OHSDP Project Director (July 14, 2006) (Bates 3439).
The walls and ceilings in the renovated wards appeared unrepaired and unpainted, and these wards' doors and windows had not been replaced. Some walls also exhibited large cracks. (See Photograph 39 on page 296.)

The stairwell leading to the roof exhibited discoloration indicating water damage and mold. The roof itself appeared to have large gaps that were permitting water to enter the hospital. (See Photograph 40 on page 296.)

Throughout the hospital, sizable gaps existed between window frames and their surrounding walls. Some windows and door frames were rusting.

The generator was not installed, and the new transformer was not connected to the power grid.

A new bore well pump had been dug and installed, but the pump was not connected to the hospital’s water supply system, and medical officials stated that the water system had not been upgraded. (See Photograph 41 on page 297.)

The significant inconsistencies between Rath’s statement of completion and the DIR’s site visit observations are an indicator that Rath’s representation was fraudulent.

5. DHH Jagatsinghpur

On September 12, 2002, OCCL signed a contract with Karunakar Mohanty (Mohanty) to construct and/or renovate portions of the hospital, including a four-story administration building, a two-story inpatient/ operating theater/OB-GYN unit, a kitchen, a minor operating theater unit, a blood bank, and staff quarters.213 The work was supposed to be completed by December 11, 2003.214 Extensive project correspondence indicated that a number of construction delays occurred for a variety of reasons not germane to this report.

On August 25, 2005, OCCL and the CDMO signed a completion certificate that stated that the above works, except the blood bank building and the medical officials’ residences, had “been completed in accordance to approved plan and specification[.] … There has been no major deviation from the original sanctioned plan and specification other than approved by Competent [sic] authority…. The civil works (Civil + PH + Elect.) and services are fit for functioning and structurally safe


214 Jagatsinghpur Completion Certificate.
and sound.”215 In addition, on August 7, 2006, OCCL sent a letter to the OHSDP Project Director stating that the medical officials’ residences had been completed, had been approved by local officials, and would be handed over within a week, pending some additional minor repairs.216 Documents produced to the DIR do not state how much Mohanty was paid for its work on this hospital.

The DIR visited DHH Jagatsinghpur on April 12, 2007—approximately one-and-a-half years after most of the work was certified complete and approximately eight months after OCCL reported that the medical officials’ residences were complete. During its visit, the CDMO told the DIR that the public works department had not accepted the works at the hospital because they failed to meet its standards. Contrary to OCCL’s certifications and reports, the DIR observed the following civil works problems at the hospital:

- The newly constructed building exhibited large cracks throughout its structure that appeared in the same location on every floor. (See Photograph 42 on page 297.)
- Renovations in the old building appeared to have been abandoned before completion. (See Photograph 43 on page 298.)
- The cement rendering was soft, porous, and broke easily—for example, when walked on harshly. (See Photograph 44 on page 298.)
- The new buildings’ window frames were rusting, and several had lost their handles. Medical officials stated that they often used bandages to keep windows closed. Newly provided steel door frames were rusting as well. (See Photograph 45 on page 299.)
- In the new four-story administration building, a shaft was built for an elevator but none was installed. Instead, pigeons were using the space for a nesting area. (See Photograph 46 on page 299.)
- A backup power generator had been provided and installed, but it was not connected to the hospital.
- Although the hospital’s new water pump was not connected to the hospital, the local government water system still provided running water. However, medical officials told the DIR that the water fixtures were of poor quality,

215 Ibid.
216 OCCL letter to OHSDP Project Director (Aug. 7, 2006).
and the DIR observed that some fixtures did not function properly—for example, one tap could not be turned off.

The significant inconsistencies between OCCL’s completion certifications and the DIR’s site visit observations are an indicator that OCCL’s certifications were fraudulent.

6. DHH Koraput

On June 26, 2002, SCAG signed a contract with R.V.R. Projects Pvt. Ltd. (R.V.R. Projects) to perform new construction and renovation work at DHH Koraput.217 The work was supposed to be completed on December 27, 2003, but work was delayed for a number of reasons, including fear of attack from Naxalite groups.218

On March 31, 2004—three months after the scheduled completion date—R.V.R. Projects, SCAG, and the ADMO signed hospital handover documents that certified the civil works as complete.219 SCAG also signed a completion certificate stating that the work had “been completed in accordance to approved plan and specification[.] … There has been no major deviation from the original sanctioned plan and specification other than approved by Competent [sic] authority…. The civil works (Civil + PH + Elect.) and services are fit for functioning and structurally safe and sound.”220

In a letter attached to these documents, SCAG stated that the completed work was performed on the patient ward, the labor and operating theater unit, the outpatient unit, the morgue, the generator, the garage, and the quarters for medical officials.221 This work included renovations to the hospital’s electrical systems.222 The completion certificate stated that there were no shortfalls or defects in the civil works.223 The DIR did not obtain documentation confirming how much R.V.R. Projects was paid for its work on the hospital, but its contract’s value was INR 38.4 million (USD 853,000).224

The project documents demonstrate that problems at the hospital appeared soon after its reported completion. On April 30, 2005—one year after the hospital was certified complete—the Public Works Department inspected the hospital and

---

218 Ibid., p. Bates 75980; SCAG letter to OHSDP Project Director (Dec. 9, 2002) (Bates 2092).
220 SCAG letter to DHH Koraput ADMO (undated) (Bates 2072).
noted a number of problems, including leaking expansion joints, doors detaching from door frames, leaking roofs, and the lack of a wall around the hospital grounds.225

The DIR visited DHH Koraput on March 28, 2007—approximately three years after the hospital was certified complete and two years after the Public Works Department's inspection. Despite SCAG's certification that the hospital was completed to specification, the DIR observed the following civil works problems:

- The new building was constructed in discrete sections without effective sealing between them, leaving gaps as wide as four inches and cracks between sections of the building. Medical officials stated that as a result, water leaks through the gaps and floods the hospital, particularly its low-lying areas. The civil engineer assisting the DIR stated that this was the result of poor design, poor performance by the contractor, and poor supervision by SCAG. (As noted in the Public Works Department's inspection, the joints between hospital buildings also were not treated or sealed.) (See Photographs 47 and 48 on page 300.)

- Walls throughout the renovated hospital exhibited cracks and discoloration indicative of water damage and mold. In the operating theater scrub room, mold was growing on the walls and causing the paint to peel away. The ceilings on the upper floor also exhibited many areas of water damage and mold. (See Photograph 49 on page 301.)

- The civil engineer assisting the DIR observed that vinyl sheet flooring in the operating theater had not been adhered to the floor properly. As a result, the sheets were shrinking and exposing gaps of bare concrete that should not appear in a “clean” room like an operating theater. (See Photograph 50 on page 301.)

- Many of the doors in the new buildings were so heavy that they were ripping the screws out of their hinges and falling off their frames. Many steel window frames and hinges were rusting or broken.

- The buildings’ exterior walls exhibited many areas of discoloration from mold, particularly in areas around the hospital's toilets. The civil engineer assisting the DIR stated that this occurred because the cement render either did not contain the specified proportions of cement and sand or was

---

not cured properly. This made it porous and allowed water to be absorbed and develop mold.

■ The backup generator was installed, but medical officials stated that they—not the contractor—had installed it and that it was not connected to the hospital.

The significant inconsistencies between SCAG’s completion certification and the DIR’s site visit observations are an indicator that SCAG’s certification was fraudulent.

7. DHH Malkangiri

On June 11, 2001, SCAG signed a contract with Sri A. Bala Rama Raju (Raju) to perform new construction, one-time repairs, and renovations at DHH Malkangiri.226 The work was supposed to be complete on September 12, 2003.227 The work was slightly delayed, and on February 25, 2004, SCAG and the ADMO signed a completion certificate stating that the work had “been completed in accordance to approved plan and specification[.] … There has been no major deviation from the original sanctioned plan and specification other than approved by Competent [sic] authority.… The civil works (Civil + PH + Elect.) and services are fit for functioning and structurally safe and sound.”228 The certificate noted only “minor defects in [the] completed building,” and SCAG and Raju certified that they had been addressed.229 The certificate does not detail the scope of work it embraces, but it does mention, inter alia, electrical work, roof work, flooring, doors and windows, painting, water supply and sewage work, and work on the patient wards, medical officer residences, and blood bank.230

SCAG and the ADMO also signed two additional completion certificates—dated May 5, 2005, and November 13, 2005—that certified that the hospital’s inside premises and electrical works were complete.231 These certificates noted that the hospital’s civil works included renovations to the hospital building, staff quarters, water supply system, and sewage system.232 No documents produced to the DIR suggest that the scope of the contractor’s work changed, and the DIR lacks

---

226 Contract between OHSDP (SCAG) and Sri A. Bala Rama Raju (June 11, 2002) (Bates 78980).
227 Orissa Health System Development Project (DOHFW) Package 3 Charge Paper for Handing Over of Project Hospital of DHH Malkangiri to Works Department, p. 2 (undated) (Bates 2671).
229 Ibid., pp. 1–3 (Bates 2709 and 2710–11)
230 Ibid., pp. 1–4 (Bates 2708–09 and 2710–11).
232 Ibid.
records detailing how much Raju was paid for its work, though its contract value was INR 19.5 million (USD 434,000).233

Despite SCAG’s certification that Raju’s work was performed to specification, within a month of the first certification medical officials began to complain about the quality of the civil works. In June 2004, the CDMO wrote to the OHSDP Project Director to complain:

After the recent rain there is heavy leakage of rain water in the O.P.D. [outpatient unit] and indoor including the minor O.T. [operating theater]. During the rain there was flooding and soiling in the O.P.D., Store room, Minor O.T. and doctor’s duty room. All the corridors are also heavily flooded. Similarly, in the Staff Quarters there are a lot of defects in the fixing of windows & doors, leaking of roofs, etc.234

In August 2004, the ADMO complained about leaks affecting the operating theater, corridors, store room, infectious patient ward, outpatient building, new laboratory building, new generator room, and x-ray building.235

The DIR visited DHH Malkangiri on March 30, 2007—three years after SCAG first stated that the civil works at the hospital were complete. In contrast to SCAG’s three certifications of completion, the DIR observed the following civil works problems at the hospital:

- The walls in the renovated patient wards exhibited discoloration suggesting water damage and mold. The roof of the operating theater leaked because the roof’s drainage pipes were clogged with leaves. (Medical officials insisted that there was no labor available to clear the leaves.) In addition, the hospital exhibited many cracks and faulty joints between the new and old buildings that medical officials stated leaked heavily when it rained. (See Photographs 51 and 52 on page 302.)

- As at DHH Koraput, the renovated hospital’s exterior walls exhibited many areas of discoloration from mold, particularly in areas around the hospital’s toilets. The civil engineer assisting the DIR stated that this occurred because the cement render either did not contain the specified propor-

---

233 Contract between OHSDP (SCAG) and Sri A. Bala Rama Raju (June 11, 2002) (Bates 78976).
234 Malkangiri CDMO letter to OHSDP Project Director (June 9, 2004) (Bates 2713).
tions of cement and sand or was not cured properly. This made it porous and allowed water to be absorbed and develop mold. (See Photograph 53 on page 303.)

- Many new steel windows and window catches were rusting or broken. Many of the doors in the new buildings were so heavy that they were ripping the screws out of their hinges and falling off their frames. (See Photograph 54 on page 303.)

- As at DHH Koraput, the new vinyl sheet flooring in the operating theater and delivery room had not been adhered to the floor properly. As a result, the sheets shrank and exposed gaps of bare concrete that should not appear in such “clean” rooms.

- While power was connected and reportedly reliable, the new generator had not been installed.

The significant inconsistencies between SCAG’s completion certification and the DIR’s site visit observations are an indicator that SCAG’s certifications were fraudulent.

8. **AH Narasinghpur**

On May 7, 2001, OCCL signed a contract with Reliance Construction (Relcon) to construct 983 square meters of hospital space and 114 square meters of new quarters for medical officials, and to perform other repair and renovation works at AH Narasinghpur. The work was supposed to be complete on March 6, 2002, but because of delays caused by another party working on part of the hospital, OCCL extended Relcon’s completion date to May 30, 2003.

On May 14, 2003, Relcon and the hospital’s Medical Officer in Charge—but not OCCL—signed a standard completion certificate stating that work had “been completed in accordance to approved plan and specification[,] … There has been no major deviation from the original sanctioned plan and specification other than approved by Competent [sic] authority…. The civil works (Civil + PH + Elect.) and services are fit for functioning and structurally safe and sound.” The certificate stated that any defects had been rectified, and the DIR obtained no documentation suggesting that the scope of works had changed. The DIR was not provided with

---

236 Contract between OHSDP (OCCL) and Reliance Construction, p. 1 (May 7, 2001).
237 Ibid., Inner Cover Page; OCCL Letter to OHSDP Project Director (June 20, 2006) (Bates 5446).
239 Ibid.
documents stating how much Relcon was paid for its work, but its contract's value was INR 8.5 million (USD 189,000).240

On May 15, 2003, Relcon, OCCL, and the Medical Officer in Charge also signed a set of hospital handover documents.241 The documents state that “the building [was] completed as per the approved plan,” and detail work done in: the inpatient unit’s wards and toilets; the outpatient unit’s wards and toilets; the operating theater; the new staff quarters; and an external sewage system.242

The DIR visited AH Narasinghpur on April 13, 2007—approximately four years after the hospital's reported completion. The DIR found that the hospital was in fairly good condition compared with many other OHSDP-funded hospitals. But contrary to Relcon’s and OCCL’s certifications, the DIR still observed the following civil works problems at the hospital:

- The exterior cement render exhibited large cracks and frequent discoloration indicative of water damage and mold. The DIR's observations at this site are consistent with problems at other hospitals that the civil engineer assisting the DIR attributed to poor-quality render. (See Photographs 55 and 56 on page 304.)

- There were large cracks and discoloration suggesting water leakage at the joints between the old and new hospital buildings.

- Many new steel doorframes were rusting. (See Photograph 57 on page 305.)

- Tiles were not installed in the patient ward, leaving the walls exhibiting bare concrete. (See Photograph 58 on page 305.)

- The CDMO stated that the hospital experienced problems with its sewage drainage system. Consistent with this observation, the DIR observed that the toilets in the patient wards were flooded with sewage.

The inconsistencies between Relcon’s certification that civil works were completed to specification; OCCL’s report that the works were completed according to plan; and the DIR’s site visit observations are less frequent than at other OHSDP-funded hospitals. However, the inconsistencies still exist, and thus remain an indicator that Relcon and OCCL’s statements were fraudulent.

240 Contract between OHSDP (OCCL) and Reliance Construction, Inner Cover Page (May 7, 2001).
242 Ibid.
9. DHH Sonepur

On June 25, 2002, K.K. Agrawal signed a contract with M.K. Mohanty to perform new construction, repairs, and renovations at DHH Sonepur. The works included renovations to the female ward, general ward, casualty unit, mortuary, an extension to the outpatient unit and minor operating theater, an extension to the administration building, and quarters for medical officers. They were supposed to be completed by September 25, 2003.

Project correspondence indicates that work on the hospital was delayed for a number of site-specific reasons, such as onsite physical obstructions. On December 27, 2005, K.K. Agrawal and the ADMO signed a completion certificate stating that the civil works had been completed on February 23, 2005, “in accordance to approved plan and specification[,] … There has been no major deviation from the original sanctioned plan and specification other than approved by Competent [sic] authority…. The civil works (Civil + PH + Elect.) and services are fit for functioning and structurally safe and sound.” The certificate states that there are no shortfalls or defects in the work. No documents indicated that the scope of work had changed, and an October 22, 2005, reconciliation statement states that M.K. Mohanty was paid INR 21.6 million (USD 480,000) for its work.

The DIR visited DHH Sonepur on April 3, 2007—approximately two years after civil works were reported complete. Despite K.K. Agrawal’s completion certification, the DIR observed the following civil works problems at the hospital:

- Building joints were covered with loose metal sheeting. The civil engineer assisting the DIR stated that this risks substantial leaks at the joints.

- Medical officials stated that the ceiling in the operating theater and many other rooms leaked when it rained. The DIR observed discoloration indicative of mold on the walls in the renovated patient wards. (See Photograph 59 on page 306.)

---

243 Contract between OHSDP (K.K. Agrawal) and Mohanty, p. 3 (June 25, 2005) (Bates 57753).
244 K.K. Agrawal letter to OHSDP Project Director (Sept. 15, 2004); Charge Paper for Handing Over of Building, Building Details Sheets (undated).
248 Ibid.
As at DHH Koraput and DHH Malkangiri, the hospital’s exterior walls exhibited many areas of discoloration from mold, particularly in areas around the hospital’s toilets. The civil engineer assisting the DIR attributed this to poor-quality cement render and/or improper curing.

The toilets in the renovated wards were flooded and locked. This may be the result of the hospital’s sewage system, which appeared to discharge onto the ground through pipes not connected to a septic system.

Many window frames were rusted, and the operating theater door’s hinge had separated from its frame. (See Photograph 60 on page 306.)

A backup generator was supplied but not installed, and in some locations electrical wiring dangled loosely against hospital walls. The DIR observed electrical boxes that were blackened by smoke, indicating that faulty wiring had caused them to overheat. (See Photographs 61 and 62 on page 307.)

The conditions observed at DHH Sonepur were not as bad as other DIR-visited hospitals, but the hospital was completed more recently and exhibited the beginnings of many problems that appeared more severely at other locations. K.K. Agrawal’s certification of works completion appears inconsistent with the DIR’s site visit observations, indicating that K.K. Agrawal’s certification was fraudulent.

10. DHH Sambalpur

On March 27, 2002, IDCO signed a contract with Shyamalal Agarwal (Shyamalal) to construct approximately 1,213 meters of new space and five new medical officer residential quarters at the hospital, as well as to perform repair and renovation work that included improving the hospital’s electrical systems.250

In a January 2004 internal letter, IDCO’s Sambalpur divisional head informed IDCO’s chief construction manager that with the exception of some repair work and the transformer and generator rooms, Shyamalal had completed its work at Sambalpur.251 On June 25, IDCO wrote to the PMC and requested the release of Shyamalal’s security deposit because “almost all the buildings viz – H-type quarters, E-type quarters, D-type quarters, ward block, central store, physiotherapy & skin ward, have been completed and handed over to C.D.M.O. Sambalpur.”252 Enclosed

---

250 Contract between OHSDP (IDCO) and Shyamalal Agarwal, pp. 1 and 6 (Mar. 27, 2002) (Bates 34058 and 34062).
251 IDCO Sambalpur Divisional Head letter to IDCO Chief Construction Manager (Jan. 23, 2004) (Bates 3236).
252 IDCO letter to OHSDP Project Director (June 25, 2004) (Bates 3216). On July 9, 2004, Shyamalal made the same representations to IDCO, i.e., that with the exception of some electrical work, its work on DHH Sambalpur...
with the letter was a handover check slip signed by IDCO and the CDMO stating that the works were complete “as per the plan and estimates.”

The accuracy of this certification was contested almost immediately. On July 24, 2004, the CDMO held a public meeting and press conference in which he alleged that most of the hospital’s roof was leaking, that IDCO had ceased its renovation work before it was finished, and that IDCO had left several hospital bathrooms incomplete. (It is unclear why the CDMO signed the handover check slip if he had these concerns about the state of the civil works.) In June 2005, the PMC conducted a civil works inspection and concluded that IDCO had lied about the hospital’s completion:

It is a complete misnomer on the part of IDCO to report that the work of DHH Sambalpur has been completed in accordance with BOQ provision. The work on various sector[s] is yet to be completed. Repair & Renovation work not completed and some of the rooms are still under the custody of the contractor but reported to have been complete and handed over.

The PMC identified defects in staircase drainage, electrical installations, plumbing work, sewage tanks, ICU and blood bank sewage connections, antistatic flooring installation, and other matters. It also stated that the main operating theater, minor operating theater, dental unit, mortuary, “DG” and eclampsia rooms, and pathology unit were not handed over and that some were still under construction or renovation.

On November 9, 2005, the PMC rescinded Shyamalal’s contract and refused to pay the firm’s final invoice because, among other things:

- The required repairs and renovations had not been completed, for example, in the pathology lab and eclampsia room.

---

253 Orissa Health Systems Development Project Check Slip (undated) (Bates 3217–18).
256 Ibid.
257 Ibid.
The contractor had dismantled the intensive care unit and blood bank sewage disposal systems but had not reconnected them to the sewage system installed for the new ward.

The septic tanks installed by the contractor were sized for 20 users each, rather than the 50 users specified by the project.

The plumbing work was inadequate.

The transformer was improperly installed, and its platform was constructed in a low-lying area that collected rainwater and thus needed to be backfilled and raised.

Several main electrical panels had not been installed, and the underground cabling to connect them to the electricity supply had not been laid.

The firm had failed to extend its bank guarantee beyond July 30, 2004, which was a “fundamental breach of contract.”

The PMC concluded that the contractor had misrepresented the works’ status “only to get your retention money refunded. This amounts to fraudulent practice.”

IDCO had certified many of the contractor’s earlier invoices for payment, and on this basis the PMC had paid for much of the work that it found to be incomplete. In a letter to IDCO sent on November 11, 2005, the PMC concluded that given the works’ incompleteness, IDCO’s issuance of a completion certificate and recommendation to release Shyamalal’s security deposit was “a criminal misconduct on the part of the concerned GM, IDCO, Sambalpur.”

Despite all these significant identified problems and indicators of fraud, in February 2006 the PMC reported to the Bank that the civil works at DHH Sambalpur were complete as of May 3, 2003.

258 OHSDP Project Director letter to Shyamal Agrawal, pp. 1–2 (Nov. 9, 2005) (Bates 3271–72).
259 Ibid., p. 2.
260 IDCO letter to OHSDP Project Director (Oct. 4, 2002) (Bates 3206) (first invoice); IDCO letter to OHSDP Project Director (July 9, 2003) (Bates 3184) (fourth invoice); IDCO letter to OHSDP Project Director (Dec. 22, 2003) (Bates 3240) (sixth invoice); IDCO letter to OHSDP Project Director (Jan. 30, 2004) (Bates 3228) (seventh invoice); IDCO letter to OHSDP Project Director (Feb. 2, 2004) (Bates 3324) (eighth invoice); IDCO letter to OHSDP Project Director (June 26, 2004) (Bates 3322) (ninth invoice); OHSDP Project Director letter to IDCO (Dec. 17, 2005) (Bates 3270) (“Further 100 percent payments to all the items mentioned in this office letter no. 10074 dt. 1.12.05 has been released [sic] as per the recommendation of IDCO.”).
261 OHSDP Project Director letter to IDCO, p. 1 (Nov. 9, 2005) (Bates 3273).
The DIR visited DHH Sambalpur on April 2, 2007—approximately three years after IDCO certified the work to be complete and two years after the PMC's inspection concluded that the certification was false. The DIR observed that many of the civil works problems identified by the PMC in 2005 persisted, including the following:

- The operating theater was locked and unused, and medical officials told the DIR that it had never been completed and handed over for their use. Renovations of other portions of the hospital also were never completed. (See Photograph 63 on page 308.)

- The walls and ceilings of the new patient ward were cracked so severely that at one location in the male ward, the DIR observed sunlight shining through from the other side of the wall. Further, many of the corridors in this ward and other renovated spaces exhibited discoloration indicative of water damage and mold.

- The joints between the old building and new ward were poorly sealed and exhibited signs of water damage. Medical officials told the DIR that during monsoon season, these joints and other ceilings leaked severely. (See Photograph 64 on page 308.)

- The new units' toilets were not connected to any septic system. Instead, the sewage flowed out of pipes and poured onto the ground near the new patient ward. Many of these bathrooms also lacked running water, and the DIR observed several sinks without connections to drains. (See Photograph 65 on page 309.)

- The diesel generator building had been constructed, but the OHSDP-provided generator was uninstalled and unused, and some hospital wiring appeared unrepaired. (See Photograph 66 on page 309.)

The civil works problems observed by the DIR are consistent with those observed by the PMC in 2005 and are inconsistent with IDCO’s 2004 certification of the works’ completion. This is an indicator that IDCO’s certification was fraudulent. The DIR’s observations are also inconsistent with the PMC’s February 2006 claim that the works were complete. Because project correspondence clearly indicates that the PMC was aware of the civil works problems at the site, these inconsistencies are indicators that the PMC’s February 2006 report of Sambalpur’s completion may have been fraudulent as well.
C. Indications That the PMC’s Status Reports Were Inaccurate

Under the Credit Agreement and the PIP, the Government of Orissa was responsible for monitoring the OHSDP’s progress and providing periodic status reports to the Bank.263 This task was fulfilled by the PMC, and the Bank relied extensively on PMC data in its supervision mission reports and ICR.264

The DIR’s site visits, however, frequently found civil works implementation problems that were inconsistent with the PMC’s status reports. For example, in February 2006 the PMC reported that CHC-II Balipatna, DHH Jagatsinghpur, DHH Koraput, DHH Malkangiri, DHH Sambalpur, and DHH Sonepur were all complete.265 Yet these six hospitals were among the 10 that the DIR identified as exhibiting strong indicators of fraud because of their civil works deficiencies. As detailed above, the PMC even certified DHH Sambalpur as complete when project documents show that the PMC was accusing the contractor and CMC of fraud because they reported the hospital complete when it was not.

In total, the PMC reported that 82 percent of the DIR-visited hospitals were complete, while the DIR observed civil works problems that suggest the opposite conclusion at 90 percent of these hospitals.266 These inconsistencies indicate that the PMC’s status reports were inaccurate.

D. Indicators of Fraud in the PMC’s Procurement of Civil Works Consultants

Because the PMC lacked the capacity to manage the OHSDP’s 156 civil works projects itself, the DOHFW—the ministry in which the PMC was located—hired consultants to design and engineer the hospital renovations and hired CMCs to procure and supervise the services of construction contractors.267 The DIR found indicators of fraudulent manipulation of procurement results—including favoring certain bidders and awarding contracts to possibly unqualified firms—in both of these sets of procurements.

263 Credit Agreement, pp. 7–8; General Conditions to Credit Agreements, pp. 14–15; OHSDP PIP, p. 329.
264 See, e.g., May 2004 Aide-Mémoire, p. 2; December 2004 Aide-Mémoire, p. 2; July 2005 Aide-Mémoire, p. 3; December 2005 Aide-Mémoire, p. 4; March 2006 Aide-Mémoire, pp. 2–3; OHSDP ICR, pp. 41–42.
266 Ibid.
267 OHSDP PIP, p. 147; OHSDP PAD, p. 49.
1. Design and Engineering Consultant Procurement

The PMC hired seven firms to design and engineer its civil works plans by letting seven contract packages for work on different groups of OHSDP-funded hospitals.\(^{268}\) The DOHFW advertised the packages, and 85 firms submitted expressions of interest that stated their qualifications. The DOHFW rated 18 firms as having the requisite qualifications and experience, and from these 18 firms it developed shortlists for each of the contract packages. The DOHFW then sent Requests for Proposals to the short-listed firms and evaluated submitted bids using a quality-and cost-based selection (QCBS) method that considered both technical merit (as subjectively evaluated against a set of benchmark criteria) and price. A firm’s proposal had to receive a technical evaluation score of at least 75 points (of 100 possible) to be considered responsive. Proposals that cleared this threshold were given an overall score, with 80 percent weight given to the technical evaluation score and 20 percent given to the financial score (price). The firm with the highest total score won the contract.

The DIR found indicators suggesting that the DOHFW fraudulently manipulated the results of tenders to award contracts to favored firms or to create the appearance of a competitive process. These indicators, standing alone, are insufficient to prove conclusively that the DOHFW manipulated tender results. However, they do suggest possible problems that merit further investigation.

Indicators That the DOHFW Manipulated Procurements to Award Contracts to Favored Firms. In two contract packages, the DOHFW’s technical evaluations scored one firm as a clear winner and two other firms barely above the 75-point minimum threshold for technical responsiveness:

- In Package One, the DOHFW gave Dalal Consultants and Engineers, Ltd. a technical score of 83.96—the third-highest score received by any firm—but gave Architects and Planners a score of 75.17 and Shankar Consultants a score of 75.04. Architects and Planners and Shankar Consultants’ bids qualified by only 0.17 and 0.04 points, respectively.

- In Package Three, the DOHFW gave STUP Consultant a technical score of 84.54—the second-highest score received by any firm—but gave Tata Consulting Engineers a score of 75.48 and Mathur and Kapre Associates

\(^{268}\) The DIR requested that the PMC provide it with complete copies of all OHSDP procurement documents. The PMC failed to do so, and the documents that it did provide often were incomplete, untitled, disorganized, and unpagedinated. Accordingly, unless otherwise noted, the following OHSDP design consultant and CMC procurement analyses are based on PMC procurement documents for which document-specific citation is impossible.
a score of exactly 75. Thus Tata’s proposal qualified by only 0.48 points, and Mathur and Kapre’s bid met the minimum requirement exactly. The technical scoring sheets for Package Three also exhibited a large number of erasures and corrections, which are indicators that the scores may have been manipulated.

The high scores assigned to the winning firm, and the scoring of two firms as barely responsive, indicates that the DOHFW may have favored the winning firm and then manipulated the losing firms’ scores to ensure that their bids were responsive, thereby creating the appearance of genuine competition.

**Indicators That the DOHFW Manipulated Procurements to Create the Appearance of Competition.** In two other contract packages that lacked a clear winner, proposals were scored at or just above the 75-point minimum technical responsiveness threshold:

- In Package Four, all three responsive proposals barely cleared the threshold: the DOHFW gave Haven Consultants a score of 75.68, Aarvee Associates a score of 75.24, and Team Consulting a score of 75.17.

- In Package Seven, the DOHFW gave two firms—SMEC International and Deccan Architects—technical scores just above 76 and gave Decoach—the third and final responsive firm—a score of exactly 75. The technical scoring sheets for Package Seven also exhibited a large number of erasures and corrections.

The scoring of all three firms just above the minimum threshold or the third responsive firm at exactly the minimum threshold indicates that the DOHFW may have fraudulently manipulated the firms’ scores in order to award the contract and/or score three firms as responsive. Such manipulation could result in an unqualified firm receiving the contract.

**Further Indicators That the DOHFW Manipulated Firms’ Technical Evaluations.** In addition to the above, the DIR found two other indicators that the DOHFW may have fraudulently manipulated firms’ technical evaluations to shape the outcome of tenders. First, a comparison of repeat proposers’ technical evaluation scores across tenders revealed that, controlling for bidder errors, the DOHFW gave widely varying technical evaluation scores to the same firm, even though it was evaluating highly similar qualifications in both cases. The DOHFW gave:

- Decoach a score of 81.02 on Package Two, but a score of 75 on Package Seven;
Ed Cil Consultants a score of 59.34 on Package Four, but a score of 76.32 on Package Six;

Ghose, Bose and Associates a score of 63.13 on Package Four, but a score of 77.44 on Package Five;

SMEC International a score of 80.82 on Package Six, but a score of 76.37 on Package Seven; and

Team Consulting a score of 75.17 on Package Four, but a score of 84.44 on Package Six.

These differences contrast with Haven Associates, which received consistent technical evaluation scores in Packages Four (75.68) and Five (74.64). Such large differences for mostly repeat proposals indicate that technical scores may have been raised or lowered to fraudulently affect tender outcomes.

Second, in two cases short-listed firms with significant professional experience nonetheless submitted proposals with obvious errors:

In Package Two, the DOHFW gave Aarvee Associates zeros in its evaluation of some of its staff qualifications—likely because the *curricula vitae* included in its proposal were unsigned. In contrast, the same firm submitted a responsive bid on Package Four.

In Package Three, the DOHFW reported that Madhya Pradesh Laghu Udyog Nigam Ltd. failed to sign the CVs included in its proposal and that Architects and Associates submitted a completely blank proposal.

These may have been genuine mistakes, but their obviousness raises questions regarding how an experienced firm could have made them.

2. CMC Procurement

To give the OHSDP a rolling start, the DOHFW hired IDCO to assist with the design, procurement, and implementation of the first 22 civil works projects because it had worked on World Bank projects in the past.\(^{269}\) IDCO, however, appears to have been in financial difficulty around the time of this sole-sourcing: according to the Comptroller and Auditor General of India, in fiscal year 1999–2000 IDCO lost INR 149.47 million (USD 3.3 million) and had accumulated a net loss of INR 319.54 million (USD 7.1 million).\(^{270}\)

\(^{269}\) OHSDP PAD, p. 49.

\(^{270}\) Comptroller and Auditor General of India, Summarized Financial Results of Government Companies and Statutory Corporations for the Latest Year for which Accounts Were Finalised (2002), http://cag.nic.in/states/
The PMC planned to open PSA contracts to competitive bidding in 1999, but this actually occurred in 2001 as part of a broader effort to expedite slow civil works progress.\textsuperscript{271} The DOHFW hired five CMCs by letting five contract packages regarding different groups of OHSDP-funded hospitals. As with its design consultants, the DOHFW first advertised the packages, and 52 firms submitted expressions of interest that stated their qualifications. From these 52 firms, the DOHFW short-listed six firms for each contract and sent them Requests for Proposals. The DOHFW evaluated submitted bids using a Fixed Budget Selection (FBS) process in which bidders submitted their technical and financial proposals, within a specified budget range, in separate envelopes. The DOHFW first opened the technical proposals and evaluated them on a 100-point scale, with a 75-point minimum threshold for responsiveness. After this evaluation, the DOHFW opened the financial proposals of responsive firms and disqualified any firms above the stated budget. The firm within the financial budget that received the highest technical evaluation score won the contract.

In four of these five tenders, the DIR found indicators suggesting manipulation of the tenders’ outcomes:

- In Package One, only two of the six short-listed firms submitted proposals, and the DOHFW found only OCCL’s proposal to be responsive. OCCL’s technical evaluation score was 76.133—just 1.133 points above the responsiveness threshold—and the DIR noted a large number of erasures and corrections on its technical evaluation scoring sheets. Further, the DOHFW gave the other competing firm—Dynamic Project—a technical evaluation score of 51.97. While the PMC did not provide the DIR with the documents needed to compare the firm’s expression-of-interest and tender submissions, this low score appears at odds with the DOHFW’s decision to short-list the firm based on its experience and technical qualifications.

- In Package Two, the DOHFW found only one firm, K.K. Agrawal and Associates, to have submitted a responsive proposal. The DOHFW gave K.K. Agrawal a technical evaluation score of 77.59—only slightly above the 75-point responsiveness threshold—and the DIR noted a large number of erasures and corrections on the DOHFW’s K.K. Agrawal technical evaluation scoring sheets.

\textsuperscript{271} OHSDP PAD, p. 49; Mid-Term Aide-Mémoire, pp. 6–7.
In Package Four, the DOHFW found two firms—MECON Ltd. and Orissa Bridge and Construction Corporation Ltd.—to have submitted responsive proposals, with technical evaluation scores of 75.60 and 75.10, respectively. Both firms cleared the technical responsiveness threshold by less than a point. The DOHFW found the proposals of two other firms—Gherzi Eastern Ltd. and Swain and Associates Ltd.—to be non-responsive for insufficient experience, despite shortlisting the firms because they supposedly had good experience and qualifications. (As before, the PMC did not provide the DIR with the documents needed to compare the firm’s expression-of-interest and tender submissions.) Further, the DOHFW was inconsistent in applying its criticism to evaluation scores: it stated that both Swain and Associates and Orissa Bridge and Construction lacked statewide project and World Bank experience, but it found Swain’s bid unresponsive and Orissa Bridge and Construction’s bid responsive. The DOHFW eventually awarded the contract to MECON.

In Package Five, the DOHFW awarded IDCO a new contract despite: (1) IDCO receiving a lower technical score than Kirloskar Consultants Ltd.; and (2) noting that, “as a sole source consultant, IDCO could not organize its team properly for design and implementation of 22 hospitals under OHSDP for which the benchmarks could not be achieved.”272 Given the FBS process used for this tender, it is likely that IDCO won the contract because Kirloskar’s proposal exceeded the contract’s budget limit, but the PMC did not produce copies of Kirloskar’s financial proposal to the DIR.

As with the OHSDP design consultant tenders, these indicators alone are insufficient to conclude that the DOHFW fraudulently manipulated tender results. However, the winning firms’ marginally responsive technical evaluation scores suggest that favored and potentially unqualified firms may have received contracts to serve as CMCs—a possibility underscored by the indicators of widespread fraud in the implementation of the OHSDP’s civil works activities.

E. Indicators of CMC-Bidder Collusion and Fraud in Contractor Procurement

The five CMCs conducted the procurement and supervision of all OHSDP civil works contractors.273 Their procurement responsibilities included finalizing bid

---

272 Consultant Evaluation Report, India, Orissa Health Systems Development Project, Credit No. ITF – 041-IN, Consultancy for Construction Management for Package No. 5 (unpaginated, undated).

273 Unless otherwise noted, all information in this section is derived from the DIR’s analysis of PMC contract data.
documents and issuing bid invitations, opening and evaluating bids, recommending contract awards, and arranging for contract signature after OHSDP tender committee approval.274

The DIR reviewed their procurements and found four indicators of bid rigging and fraud: (1) the contracts exhibited very low levels of competition, with only 190 firms competing for 155 contracts; (2) the CMCs frequently found low-price bidders to have submitted non-responsive bids, resulting in 25 percent of all contracts not being awarded to the lowest bidder; (3) winning contract prices exceeded the CMCs’ cost estimates in 80 percent of the procurements; and (4) 13 firms subcontracted 27 contracts without PMC approval. In addition, the DIR found that the PMC failed to maintain complete procurement records, in apparent violation of the OHSDP Credit Agreement.

In total, the OHSDP issued 13 invitations for bids on 36 packages of contracts that were managed by the five CMCs. These packages resulted in the award of 155 individual contracts. The DIR reviewed data from these contract tenders as a whole, by CMC, by district, by package, and by contractor. The DIR also performed an in-depth review of the procurement documents for a selection of eight contract packages that resulted in 52 individual contracts. The DIR selection covered 34 percent of all OHSDP contracts and included all five CMCs (Table 2).

### Table 2. The DIR Review Selection of OHSDP Civil Works Contracts

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Selection</th>
<th>Percentage Reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.K. Agrawal</td>
<td>32</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>IDCO</td>
<td>49</td>
<td>28</td>
<td>57</td>
</tr>
<tr>
<td>MECON</td>
<td>22</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>OCCL</td>
<td>23</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>SCAG</td>
<td>29</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td><strong>All Contracts</strong></td>
<td><strong>155</strong></td>
<td><strong>52</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

* The DIR was unable to identify the CMC responsible for one hospital.

As a result of this review, the DIR found the following.

1. **Competition for OHSDP Tenders Was Low**

   Across all OHSDP tenders, 190 firms competed for 155 contracts. Such a low level of competition may have been caused by the procuring authority deterring

---

274 See, e.g., IDCO General Contract, appx. A(1)(v).
other firms from competing, and/or fraudulently excluding those that did compete, in order to favor a certain bidder. Most OHSDP civil works contracts attracted between only one and three bidders (Figure 1).

**Figure 1. Distribution of Contracts by Number of Bidders**

Contracts with few bidders were not distributed evenly among the CMCs. Low competition was more prominent in tenders conducted by K.K. Agrawal, 44 percent of which had only one or two bidders, and SCAG, 34 percent of which had only one or two bidders (Figure 2).

**Figure 2. Distribution of Contracts with One or Two Bidders, by CMC**
Contracts with few bidders also were more common in some districts than others. In 10 of Orissa’s 30 districts, more than 40 percent of the district’s OHSDP tenders attracted only one or two bidders (Figure 3).

**Figure 3. Distribution of Contracts with One or Two Bidders, by District**

In addition, the DIR observed that certain firms were exceptionally successful in winning the contracts for which they bid. Eighteen firms bid only once and won the contract for which they bid; 44 percent of these cases occurred in IDCO procurements. Similarly, three firms competing on SCAG tenders and three firms competing on K.K. Agrawal tenders won all the contracts for which they bid.275

The low level of OHSDP contract competition, the more frequent occurrence of low competition in tenders administered by certain CMCs or in certain districts, and certain firms’ ability to win every contract for which they bid are indicators of bid rigging and fraud. Consistent with such a scheme, the DIR also found that lower-priced bidders were often disqualified from tenders for submitting non-responsive bids.

---

275 The three SCAG bidders won 11 contracts between them, while the three K.K. Agrawal bidders won six contracts between them. The SCAG bidders were BSES Ltd. (six contracts), SYN Developers Pvt. Ltd. (three contracts), and Bamabasi Panda (two contracts). The K.K. Agrawal bidders were Rajbir Prasad Aggarwal, M.K. Mohanty, and K.K. & Sons, each of which won two contracts.
2. The CMCs Frequently Found Low-Price Bids to Be Non-Responsive

In six of the eight packages that it reviewed, the DIR found repeated cases in which the CMC declared the bid of a lower-priced bidder to be non-responsive and eliminated it from the tender. Twenty-five percent of all OHSDP civil works contracts were not awarded to the lowest bidder. The CMCs may have disqualified some of these bids for legitimate reasons, but the frequency of the disqualifications—particularly given the low levels of OHSDP contract competition—is an indicator that some disqualifications may have been made on pretextual grounds in order to favor a higher-priced bidder. In total, the OHSDP would have saved INR 26.9 million (USD 598,000) if it had awarded all these contracts to the lowest-price bidder.

While all five CMCs disqualified lowest-priced bidders, some CMCs did so more frequently than others. IDCO was the most likely to disqualify a lower bidder, followed by SCAG and K.K. Agrawal (Figure 4).

Figure 4. Disqualified Lowest-Evaluated Bidders, by CMC

Note: Percentages are the proportions of contracts with the lowest bidder rejected.
The disqualification of lower-cost bidders was more common in certain districts than others. In nine districts, lower-priced bidders were found non-responsive in 50 percent or more of all contracts put to tender. Figure 5 details this trend.

**Figure 5. Contracts With and Without Lower-Bidder Rejections, by District**

The result of these disqualifications was that the firms providing OHSDP tender competition were excluded from tenders. Unlike the 88 firms that bid on only one OHSDP contract, 75 percent (30 of 39) of the disqualified lower bidders were repeat bidders that competed for three or more contracts (Figure 6).
The high frequency of low-price-bidder disqualifications and the tendency for this to occur more frequently with some CMCs and in some districts are indicators of bid rigging and fraud. Not all facts suggest bid rigging: the three firms that won the most OHSDP contracts—BSES Ltd. (six contracts), Pramod Kumar Rath (five contracts), and the Orissa Small Industries Corporation (OSIC, five contracts)—were among the lower bidders disqualified in other tenders. However, this fact does not eliminate the possibility of favoritism within individual tenders or the overall pattern of low-bidder disqualification. Consistent with this indicator, the DIR found that OHSDP civil works contracts frequently exceeded the cost estimates generated by the CMCs’ engineers.

3. Contract Prices Often Exceeded the CMC Engineers’ Cost Estimates

Eighty percent of the OHSDP civil works contracts were awarded at prices that exceeded their cost estimates.276 This high frequency of unexpectedly high contract prices is an indicator of bid rigging and fraud affecting the procurement process. The distribution of contracts over their cost estimates is provided in Figure 7.

---

276 This occurred in 124 contracts out of 155.
Contracts with high prices usually resulted from tenders with low levels of competition. Contracts that exceeded their cost estimate by 15 percent or more were most common in tenders with three bidders or fewer (Figure 8).

Some CMCs were also more likely to award high-price contracts than others, further suggesting bid rigging. While all of the CMCs’ average contract prices exceeded their cost estimates, SCAG’s contracts were significantly more expensive
than the norm: they averaged 16 percent above estimate, equating to an INR 1.1 million (USD 25,000) price increase on each contract. By comparison, the firm with the next highest average, K.K. Agrawal, awarded contracts at an average of 11 percent above estimate.

**Figure 9. Increase of Contract Price Over Cost Estimate, Range and Average, by CMC**

Note: Ranges are in parentheses; columns state the average amount by which contract values exceeded their cost estimates.

The extent to which contract prices exceeded cost estimates varied by district as well. Figure 10 illustrates by district the average percentage by which contract prices exceeded their cost estimates.
In addition, the DIR found that even within the same district, the CMCs differed significantly in how much their contract prices exceeded their cost estimates. For example, IDCO, K.K. Agrawal, and OCCL all conducted tenders in the district of Bolangir. But while K.K. Agrawal’s contract prices were only 4.8 percent over estimate, OCCL’s prices were 9.6 percent over estimate, and IDCO’s prices were 19.4 percent over estimate. Similar variations existed between IDCO and SCAG in the districts of Malkangiri and Gajapati. Figure 11 details this pattern in seven districts.
OHSDP procurement documents also note significant variations between the cost estimates and contractors’ bid prices for specific items listed in each contract’s bill of quantities. In India, item prices that vary more than 40 percent from the cost estimate are called “unbalanced items,” and bidders are required to provide additional performance security to address the risks associated with them.277 The DIR observed several cases of unbalanced items and inconsistent treatment of bidders in its contract documents selection:

- In a 2000 SCAG-administered tender, the DIR found that three of the six contracts were awarded to firms whose bids contained unbalanced items. SCAG also requested inconsistent bid security amounts from bidders, which may indicate favoritism: it required Gyanendra Nath Das to provide a two percent security for unbalanced items comprising 11 percent of its CHC-II Kanpur bid cost, but it required Reliance Construction to provide a 10 percent security for unbalanced items comprising 14 percent of its AH Narasinghpur bid cost. In a third case, SCAG did not require G.K. Singh to provide any additional security for its CHC-II Derabish bid despite having unbalanced items that comprised 7.6 percent of its bid cost.

277 Department of Health and Family Welfare Standard Invitation for Bids, para. 29.5.
In a 2000 K.K. Agrawal–administered procurement, the DIR identified unbalanced items comprising contracts’ civil works, public health works, and electrical works components. For example, Dilip Construction’s bid for work on CHC-II Mahipur priced certain civil works items 55 percent below the cost estimate, certain public health works items 50 percent below the cost estimate, and certain electrical works items 65 percent below the cost estimate. Yet despite these item prices being below estimate, Dilip’s overall bid price was 31.8 percent above estimate.

In a 2000 IDCO-administered procurement, the DIR identified unbalanced items in 11 of the 13 contracts put to tender. The DIR also noted that in a 2001 IDCO-administered tender two contractors’ winning bids stated a total bid price and individual line item prices that were nearly identical to the cost estimate.

First, K.K. Mohanty’s bid for a contract on CHC-II Mudrajore was only 0.03 percent lower than the cost estimate, and 87 percent of its bill-of-quantity item bid prices were either exactly the same as the cost estimate or rounded up or down from the cost estimate. Table 3 provides examples of these items.

---

278 Dilip Construction’s Bid for Contract for New Construction, One-Time Report and Renovation of CHC-II Mahipur, in the District of Nayagarh, Contract ID # 1166788748. For civil works, the cost estimate was INR 885,000, and Dilip quoted INR 402,000; for public health works, the cost estimate was INR 536,000 and Dilip quoted INR 265,000; and for electrical works, the cost estimate was INR 104,000 and Dilip quoted INR 36,000.

279 Ibid. The cost estimate was INR 5,030,000, and Dilip’s bid price was INR 6,628,743.50.

280 DIR Contract ID No. 1099256565. The cost estimate was INR 3,957,931, while K.K. Mohanty’s bid price was INR 3,959,041—a difference of only INR 1,110.
Table 3. Examples of Cost Estimates and K.K. Mohanty Bill-of-Quantities Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Unit</th>
<th>Estimate Rate</th>
<th>Bidder Rate</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stripping off the damaged concrete surface, including the plaster, if any, as per the direction of the engineer-in-charge</td>
<td>85</td>
<td>sqm</td>
<td>150</td>
<td>150</td>
<td>0</td>
</tr>
<tr>
<td>Supplying, laying, and fixing in position RCC spun pipe with collar joined with cement porter (1:3), excluding the cost of spun pipes and collars</td>
<td>30</td>
<td>rmt</td>
<td>233.5</td>
<td>230</td>
<td>3.13</td>
</tr>
<tr>
<td>Painting steel surface with synthetic paint of approved quality and shade as per the direction of the engineer-in-charge</td>
<td>105</td>
<td>sqm</td>
<td>64.33</td>
<td>65</td>
<td>–0.67</td>
</tr>
</tbody>
</table>

Second, H.K. Pradhan’s bid for a contract on CHC-I Hindol was only 0.21 percent lower than the cost estimate, and 31 percent of its bill-of-quantities item bid prices were either exactly the same as the cost estimate or rounded up or down from the cost estimate. Table 4 provides examples of these items.

Table 4. Examples of Cost Estimate and H.K. Pradhan Bill-of-Quantities Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Unit</th>
<th>Estimate Rate</th>
<th>Bidder Rate</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proving, fitting, and fixing fully glazed sliding windows (two track) made out of extruded aluminum alloy sections</td>
<td>8</td>
<td>sqm</td>
<td>1,800</td>
<td>1,800</td>
<td>0</td>
</tr>
<tr>
<td>Extra lift of 1.5 meters or part thereof over the initial lift of 1.5 meters</td>
<td>133</td>
<td>cum</td>
<td>23.61</td>
<td>23</td>
<td>0.61</td>
</tr>
<tr>
<td>Painting one primer coat and/or more coat with synthetic enamel paint on old steel work</td>
<td>30</td>
<td>sqm</td>
<td>39.41</td>
<td>40</td>
<td>–0.59</td>
</tr>
</tbody>
</table>

These similarities suggest that K.K. Mohanty and H.K. Pradhan obtained a copy of the confidential cost estimate and may indicate IDCO favoritism toward these firms.

281 DIR Contract ID No. 1167732022. The cost estimate was INR 4,819,836, while H.K. Pradhan’s bid price was INR 4,829,951—a difference of only INR 10,115.
The DIR thus found frequent and large discrepancies across the OHSDP civil works contracts’ cost estimates, as well as prices that: (1) correlated with low bidder competition; and (2) varied by CMC, both across and within districts. The large discrepancies between cost estimates and contract prices could have been caused by poor-quality estimates, outdated estimates, or significant changes in the market prices for relevant commodities. However, the frequency and scale of the differences—and the appearance and inconsistent treatment of numerous unbalanced items in the OHSDP bid documents—make these differences an indicator of bid rigging and fraud.

4. Several Contractors Subcontracted Their Work Without PMC Approval

In June 2003, the PMC issued a letter identifying 13 contractors that had subcontracted their work to other firms without PMC approval. The DIR also identified several of these subcontracting cases in its review of hospital-related correspondence. Between them, these contractors had awarded 27 unauthorized subcontracts for work on hospitals managed by four CMCs (Table 5).

Table 5. Unauthorized Subcontracting, by CMC

<table>
<thead>
<tr>
<th>CMC</th>
<th>Total Number of Subcontracts</th>
<th>Allocation by Subcontractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAG</td>
<td>8</td>
<td>BSES Ltd. (6), SYN Developers (2)</td>
</tr>
<tr>
<td>IDCO</td>
<td>7</td>
<td>G.S. Construction (1), Sri K. K. Mohanty (1), Sri Bidyadhar Naik (1), OBCC (1), OSIC (2), Sri Ram Enterprises (1)</td>
</tr>
<tr>
<td>MECON</td>
<td>7</td>
<td>Consultorium (2), G. D. Moharan &amp; Associates (1), OSIC (2), Mahendra Swain (2)</td>
</tr>
</tbody>
</table>

This subcontracting is an indicator of attempted fraud by the contractors upon the project and may have contributed to the low competition on OHSDP tenders by providing an alternative way for less-qualified firms to obtain project-funded work. The subcontracting is also an indicator of CMC-contractor collusion because, though the CMCs were responsible for supervising this work, the DIR obtained no documents indicating that they acted to stop this unauthorized subcontracting. Accordingly, these 27 unauthorized subcontracts merit further investigation.

---

282 OHSDP Project Director letter to DOHFW Commissioner-cum-Secretary, pp. 1–2 (June 16, 2003).
5. The PMC Failed to Produce or Retain Complete Procurement Documentation

The PMC purported to provide the DIR with full and complete copies of all its OHSDP procurement documentation. Yet the DIR's review of its selection of contract documents found that in six of the eight contract packages reviewed, documents were missing, incomplete, or illegible. Missing documents included bid devaluation reports, bid documents, and large portions of bid documents. In two packages—OHSDP (November 12, 2000) and SCAG (November 9, 2000)—the DIR found that the PMC had not retained the bid documents of any losing bidders, and the bid evaluation reports' bills of quantities were missing pages.

The Credit Agreement required the Government of India to “ensure that all records (contracts, orders, invoices, bills, receipts, and other documents) evidencing … expenditures are retained until at least one year after the [Bank] has received the audit report for the Fiscal Year in which the last withdrawal from the Interim Fund Credit Account was made” and to “enable the [Bank's] representatives to examine such records.”283 The PMC’s failure to retain or produce these core procurement documents raises serious concerns regarding the accuracy and transparency of the bid evaluation process, prevents effective project audit, and may violate the Government of India’s obligations under the OHSDP Credit Agreement.

The OHSDP’s civil works component exhibited indicators of fraud in its implementation and bid rigging and fraud in its procurement. The DIR identified similar indicators in the project’s equipment component.

Equipment, Instruments, and Furnishings

In addition to improving the buildings at 156 Orissa hospitals, the OHSDP also provided new medical equipment, instruments, and furnishings (EIF) to those hospitals to improve their patient treatment capacity. The DIR found indicators of fraud and corruption in the procurement and provision of these EIF items that in turn may have adversely affected their installation, performance, and repair. The DIR’s most significant finding was that suppliers frequently provided equipment that was substandard and/or potentially hazardous; that these firms’ bids often contained fraudulent technical compliance certificates (or lacked such certificates altogether); and that ELMARC’s failure to identify any of these issues in its bid evaluations and EIF inspections suggests its complicity in these apparent

---

283 Credit Agreement, pp. 7–8.
frauds. Consistent with this finding, the DIR also observed that equipment was non-functional when delivered or not installed properly, despite supposedly being inspected by ELMARC; that equipment was oversupplied or provided to hospitals that lacked the staff or training to use it; that ELMARC and the project suppliers did not respond to equipment quality complaints; and that ELMARC’s EIF procurements exhibited indicators of bid rigging.

As the next section details, the DIR also found that the success of the OHSDP’s equipment components was at risk from the very beginning because of equipment maintenance gaps and ELMARC’s financial troubles.

A. ELMARC Was Highly in Debt at the Time of Its First Contract, and Its Contracts Gave It No Responsibility for Maintenance

To review the OHSDP’s EIF implementation, the DIR first researched ELMARC’s corporate background and the terms of its OHSDP contracts. The DIR found that ELMARC was highly in debt at the time of its first contract and that its contracts failed to include equipment maintenance responsibility, as was required by the PIP and the OHSDP Project and Credit Agreements.

In 1997, the DOHFW proposed sole-sourcing the management of the OHSDP’s EIF component to ELMARC, a state-owned enterprise established in 1991 to provide maintenance services to users of professional electronic equipment.284 To justify ELMARC’s sole-sourcing, the DOHFW noted the firm’s technical skill, its past experience in the state health sector, the efficiency and project ownership benefits of using a local firm with government connections, and the lack of a viable alternative choice.285 The DOHFW indirectly acknowledged ELMARC’s capacity limitations by recommending an effort “to strengthen ELMARC in terms of infrastructure and training to address in a cost-effective manner the issue of maintenance on a permanent basis.”286 But it did not mention ELMARC’s financial status. According to the Comptroller and Auditor General of India, in fiscal year 1996–1997 ELMARC was, but for its government support, effectively insolvent: it lost INR 8.1 million (USD 180,000) and had accumulated net losses of INR 12.38 million (USD 275,000) that exceeded its total paid-in capital of INR 10.1 million

284 OHSDP PIP, ch. 7, pt. 2(C), para. 3.0; DOHFW Commissioner-cum-Secretary M. Gupta letter to T. Nawaz, pp. 1–2 (Aug. 22, 1997).
286 Ibid., p. 2.
While this fact does not indicate fraud or corruption, it appears to have gone previously unnoticed by the Bank and raises questions regarding ELMARC’s capacity to fulfill its contractual obligations.

On March 22, 1999, the DOHFW awarded ELMARC a consulting contract to implement the OHSDP’s EIF components. ELMARC’s contract was extended four times, to a final date of September 30, 2006. ELMARC’s responsibilities also expanded over time: its initial contract required it not only to conduct equipment procurement—including drafting equipment specifications and soliciting and evaluating bids—but also to inspect procured equipment, maintain accounts for winning bidders, and provide progress reports to the PMC. ELMARC’s August 3, 2001, contract extension made it responsible for monitoring and responding to post-procurement issues such as equipment installation and training. ELMARC’s final extension further expanded its duties to include “ensur[ing] installation of the balance equipment procured by this project for the project hospitals”; verifying installation; and recommending final payment to suppliers.

However, all of ELMARC’s contracts were deficient in one important respect: they did not make ELMARC responsible for EIF maintenance. Under the PIP, ELMARC was to be responsible for the “one-time repair of defective equipment, instruments and furniture in the hospitals selected to receive World Bank inputs,” and for “extend[ing] maintenance support for new equipment to be procured under this project beyond the warranty period.” ELMARC’s contract, however, made the hospitals’ medical officers responsible for EIF maintenance. (These medical officers, in turn, informed the DIR that they did not know who to contact to obtain repairs or warranty-based service—a problem exacerbated by the closure of the PMC and rumors that ELMARC itself would close.) The PMC’s failure to make ELMARC responsible for maintenance violated the PIP and as a result

290 ELMARC 1999 Contract, appx. A (Description of Services).
291 ELMARC 2001 Contract, appx. A (Description of Services).
292 ELMARC Continuance Agreement, para. 3; ELMARC letter to OHSDP Project Director (July 24, 2006).
293 OHSDP PIP, para. 3.1.
294 Ibid., para. 3.2.
295 ELMARC 2001 Contract, appx. A.
violated both the OHSDP Project Agreement (which required the Government of Orissa to implement the project in accord with the PIP) and the OHSDP Credit Agreement (which required the Government of India to “cause Orissa to perform in accordance with the provisions of the Project Agreement all the obligations of Orissa therein set forth”).

B. Indicators of Fraud and Corruption in EIF Implementation

The DIR identified six indicators suggesting that ELMARC and its suppliers engaged in fraud and corruption in the implementation of the OHSDP’s EIF components.

1. Suppliers Provided, and ELMARC Accepted, EIF Items that Were Technically Non-Compliant and Accompanied by Fraudulent or Non-Existent Technical Compliance Certificates

During its visits to OHSDP-funded hospitals, the DIR inspected units of ELMARC-procured EIF items and found that many were non-compliant with the bidding documents’ stated technical specifications. In some cases, the equipment posed a danger to human health and safety. The DIR also found that ELMARC had awarded contracts for this non-compliant equipment to firms whose bids: (1) lacked the required certifications of technical compliance; (2) contained certifications that appeared on their faces to be fraudulent; or (3) contained documents that bidders fraudulently represented to be “certifications” when in fact they did not certify compliance with any standard.

ELMARC’s failure to adequately review the certifications included with suppliers’ bids and its failure to conduct adequate EIF inspections may have been caused solely by a lack of capacity or poor performance. However, the high frequency and obviousness of these problems suggests that ELMARC may have conspired with its suppliers to fraudulently certify non-compliant or dangerous equipment as meeting project specifications. The OHSDP’s EIF implementation failures are therefore an indicator of fraud and corruption meriting further investigation. The DIR’s detailed findings follow.

The DIR Identified OHSDP-Procured EIF Items That Were Non-Compliant with Technical Specifications or Hazardous. The DIR identified 17 different types of OHSDP-procured EIF that did not comply with the technical specifications stated in the OHSDP bid documents and/or were hazardous to the medical staff and patients using it.

296 Project Agreement, secs. 2.01(b) and sched. 2, para. 1–15; Credit Agreement, pp. 6–7.
A biomedical engineer assisting the DIR identified the following 12 types of equipment as not complying with bid document specifications because of faulty design, poor-quality materials or fabrication, systemically poor installation, and/or a failure to provide required test and compliance certifications (which are safeguards to ensure good manufacturing and product safety). In the engineer’s opinion, these defects originate in the supplier’s design, manufacturing, and quality-assurance processes and therefore are likely endemic throughout the firm’s production:

- **Airconditioning units**: 274 provided by Manisha Engineering and CAS Engineers Pvt. Ltd. at a cost of INR 5.8 million (USD 127,000);
- **Waste management autoclaves**: 25 provided by Yorco Sales at a cost of INR 9.3 million (USD 205,000);
- **Bedside lockers**: 3,809 provided by Vishala Industrial Craft and Super Cardiac Breaths at a cost of INR 6.1 million (USD 137,000) (see Photograph 67 on page 310);
- **Two-body cold mortuaries**: 82 provided by Spectrum Scientific and Super Cardiac Breaths at a cost of INR 7.4 million (USD 163,000) (see Photograph 68 on page 310);
- **Delivery tables**: 188 provided by Surgicoin at a cost of INR 4.2 million (USD 92,000), as well as additional delivery tables provided by Eastern Supplies (see Photograph 69 on page 311);
- **Fixed operating theater lights**: 147 provided by Surgicoin at a cost of INR 5.4 million (USD 118,000) (see Photographs 70 and 71 on pages 311–312);
- **Floor-mounted grouting chairs**: 3,313 provided by Vishala Industrial Craft at a cost of INR 10.9 million (USD 243,000) (see Photograph 72 on page 312);
- **Hospital beds**: 3,381 provided by United Surgical Industries, Vishala Industrial Craft, and A.M. Technologies at a cost of INR 7.5 million (USD 165,000) (see Photographs 73 and 74 on page 313);

The following discussion is based on contract information provided by the PMC. U.S. Dollar equivalent values calculated based upon the daily exchange rate on the date of the contract. The DIR observed that, at times, ELMARC’s electronic procurement records were inconsistent with the PMC’s contract records. The DIR relies on the PMC’s contract information because it likely is more accurate. These figures also do not include any EIF procured through local shopping.

Eastern Supplies’ national shopping contract data were not provided to the DIR.
Hydraulic operating tables: 113 provided by Carewell Medical Systems at a cost of INR 5.1 million (USD 110,500) (see Photograph 75 on page 314);

Mobile operating theater lights: 174 provided by M.E. & I Services at a cost of INR 2.2 million (USD 47,000) (see Photograph 76 on page 314);

Stainless steel stools: 8,834 provided by Equipment de Chandigarh at a cost of INR 3.3 million (USD 74,000) (see Photograph 77 on page 315); and

Water distillation units: 188 provided by Yorco Sales at a cost of INR 3.5 million (USD 77,000).

In addition, the engineer identified five items of equipment that not only violated applicable specifications but also were potentially dangerous to the health and safety of patients and medical staff. As with other non-compliant equipment, in the engineer’s opinion these defects originate in the supplier’s design, manufacturing, and quality-assurance processes and therefore likely occur throughout the firm’s production:

Vertical autoclaves: 162 provided by Yorco Sales, Narayan Industries, and Variety Vyapaar at a cost of INR 3.9 million (USD 84,000), which include welded high-pressure steam chambers that could become dangerously hot or corrode and fail, risking explosion (see Photograph 78 on page 315);

Baby incubators: 330 provided by Ravi Enterprises and Delta Medical Appliances at a cost of INR 13.5 million (USD 296,000), which do not contain an adequate electrical grounding protection system and under certain circumstances could expose patients and caretakers to a risk of electrical shock (see Photograph 79 on page 316);

Bacteriological incubators: 116 provided by Yorco Sales at a cost of INR 4.4 million (USD 96,000), which do not contain an adequate electrical grounding protection system and under certain circumstances could expose patients and caretakers to a risk of electrical shock;

Infant phototherapy units: 198 provided by Delta Medical Appliances at a cost of INR 2.6 million (USD 56,000), which do not contain an adequate electrical grounding protection system and under certain circumstances could expose patients and caretakers to a risk of electrical shock (see Photograph 80 on page 316); and

The DIR informed the region of these risks on June 13, 2007.
- Radiant baby warmers: 108 provided by Ravi Enterprises and Delta Medical Appliances at a cost of INR 2.8 million (USD 62,000), which do not contain an adequate electrical grounding protection system and under certain circumstances could expose patients and caretakers to a risk of electrical shock. (see Photograph 81 on page 317).

Four of these pieces of equipment are of particular concern. Narayan Industries’ and Variety Vyapaar’s autoclaves—machines that use high-pressure steam to sterilize their contents—had welded seams on their inner chambers that exhibited corrosion. When the autoclave is in operation, the inner chamber contains the high-pressure steam. If this seam were to fail, the pressure from the steam could cause the autoclave to explode, endangering the safety of anyone nearby.

Compounding this risk, the biomedical engineer noted that of a group of 72 procured units, ELMARC could produce only two certificates stating that the autoclaves had been pressure tested. Further, these certificates provided only the manufacturer’s assertion that the test results were compliant with relevant standards. They did not describe the tests performed or the test results themselves. In the engineer’s opinion, the autoclaves are sufficiently hazardous that the hospitals that received them should be advised to stop using them until the supplier has provided either copies of unit-specific test certificates or performed pressure-safety tests on units for which certificates cannot be produced.

In addition, the engineer observed that the baby incubators, radiant baby warmers, and infant phototherapy units provided by Delta Medical Appliances and Ravi Enterprises (which stocked Delta Medical equipment) all lacked proper electrical grounding systems. As a result, in the event of common system faults such as electrical insulation breakdowns or component failures, the equipment's external metal chassis could conduct live current and shock any baby or caregiver who contacts those sections of the machine. The engineer also noted that Delta Medical’s radiant baby warmers contained ceramic-sheathed heating elements that frequently broke down because of a design weakness. In some cases, the DIR observed that medical staff chose to suspend light bulbs from these defective machines as a substitute warmer for the babies. The World Health Organization
has stated that this use of “spot lights or bulbs [is] dangerous because they focus the heat and may burn the baby.”

**ELMARC Awarded EIF Contracts to Firms that Failed to Supply Required Technical Certifications or Provided Certifications That Appear Fraudulent.** To determine whether the OHSDP’s technically non-compliant EIF items were caused by fraud, the DIR reviewed a selection of the bid documents from firms that supplied this equipment. The DIR found that these bids frequently did not include certifications of technical compliance or, in the alternative, provided certifications that appeared to be fraudulent. ELMARC’s failure to identify and address these obvious problems suggests that it may have been a party to the suppliers’ fraudulent schemes.

The DIR identified three types of technical certification document failures. First, some firms failed to provide certifications and test results with their bid documentation.

- **Yorco Sales’** bid for an autoclave contract included only a sales brochure that provided illustrations and technical details regarding its models. The bid contained no independent verification that Yorco Sales’ product complied with ELMARC’s stated technical specifications, and its statement of technical details was identical to the technical specifications published in the bid documents. Despite this lack of required documentation, ELMARC awarded the contract to Yorco Sales.

- **Super Cardiac Breaths**’ bid to supply two-body mortuaries included only a sales brochure describing its products and their technical specifications. This brochure’s statement of the mortuaries’ technical specifications appeared to have been copied from the bidding documents’ technical specifications: it was phrased in an identical manner and contained almost exactly the same content. Yet despite these indicators of fraud and the lack of independent certification of the mortuaries’ specifications, ELMARC awarded the contract to Super Cardiac Breaths. The biomedical engineer assisting the DIR found that these mortuaries did not contain inner and outer stainless steel construction and thus did not meet required specifications.

---

380 World Health Organization Maternal and Newborn Health / Safe Motherhood Unit, Safe Motherhood: Thermal Protection of the Newborn, a Practical Guide, p. 29 (1997). The biomedical engineer assisting the DIR also observed that the air-ether machines purchased with OHSDP funds were unused, and that the anesthesiologists that he interviewed “intensely disliked” the machines because they felt that the technology was obsolete and possibly dangerous.
Surgicoin’s bids for bedside lockers and operating theater lights also contained specification statements that were a near-verbatim copy of the project’s published technical specifications. Surgicoin’s operating theater lights statement even contained the same grammatical errors as the published technical specifications. Further, Surgicoin failed to include any government-recognized laboratory reports showing its lamps’ conformity with applicable standards. Despite these indicators of fraud and lack of required documentation, ELMARC awarded the contracts to Surgicoin. The biomedical engineer assisting the DIR found these units of equipment to be non-compliant with the project’s technical specifications, in part because they lacked required testing certification.

Second, some firms submitted certifications that appeared fraudulent on their face.

Yorco Sales’ bid for a contract to supply water distillation units included two documents that both purported to be ISO 9001:2000 certifications issued by the British Standards Institution (BSI). The documents were formatted differently, but they stated the same certification number and date. This casts doubt on their legitimacy. Further, neither the BSI’s website, which lists certified firms, nor Yorco Sales’ own website state that Yorco Sales is ISO 9001:2000 certified. The biomedical engineer assisting the DIR found that these water distillation units did not comply with the project’s technical specifications because they lacked required testing certification.

Vishala Industries’ bid for a contract for bedside lockers and grouting chairs included documents purporting to be ISO 9001:2000 accreditations from DLIQ, the Joint Accreditation System of Australia and New Zealand. The “certificates” were for different products, but they: (1) shared the same registration certificate number; (2) stated that they were issued from the same office on the same day; and (3) were formatted very differently from one another. These inconsistencies cast doubt on their legitimacy, and the biomedical engineer assisting the DIR found that the lockers and chairs failed to meet the project’s technical specifications.

The DIR found facts suggesting that Surgicoin and Super Cardiac Breaths are related firms: Surgicoin supplied Super Cardiac Breath products to the project, and the Delhi Online Yellow Pages listing for Super Cardiac Breaths directs the browser to Surgicoin’s website. See http://www.delhiyellowpagesonline.com/directory/1670/Medical, percent Diagnostic percent20 percent20Hospital percent20Supplies.htm. In addition, in January 2004 the Indian equipment firm Narutek sent a complaint to the Bank alleging that Naresh Grover, an Indian businessman whom the Bank sanctioned for fraudulent practices in October 2003, was affiliated with both Surgicoin and Super Cardiac Breaths. Narutek letter to OHSDP Project Director (Jan. 24, 2004).
On tenders for various EIF products, Bijoy Steel Furniture, Medical Equipment and Instrument Services (MEIS), Narayan Industries, and Variety Vayapar submitted bids that contained documents purporting to be ISO 9001:2000 certifications by Bureau Veritas Quality International (BVQI). The DIR noted that these certificates were sequentially numbered and exhibited alternating dates that were inconsistent with their certificate numbers.

- Certificate 139664 (Variety Vayapar) was dated November 24, 2003.
- Certificate 139665 (MEIS) was dated November 18, 2003.
- Certificate 139666 (Narayan Industries) was dated November 24, 2003.
- Certificate 139667 (Bijoy Steel Furniture) was dated November 18, 2003.

This pattern suggests that the certificates may be fraudulent.

In an unsuccessful bid to supply revolving stools, Super Cardiac Breaths provided a document that purported to be an ISO 9001:2000 certification from ABS Texas. ABS Texas’ website, which lists accredited firms, shows no record of Super Cardiac Breath’s accreditation. Similarly, in a successful bid to supply stainless steel stools, Equipment de Chandigarh produced a document claiming to be a “certificate of approval” from QMS Certifications Services. QMS Certifications Services’ website, which lists accredited firms, does not list Equipment de Chandigarh as accredited, and the biomedical engineer assisting the DIR found that these stools did not meet the project’s technical specifications.

Third, some firms submitted documents that purported to be certifications but were not.

Carewell Medical Systems’ bid for a hydraulic operating theater table contract included a document entitled a “calibration certificate,” but the certificate did not regard calibration at all: it discussed only the unit’s physical dimensions as confirmed by a measuring tape. Despite this obvious flaw in the bid documentation, ELMARC awarded Carewell the contract. The
biomedical engineer assisting the DIR found that these tables did not meet the bid documents’ specifications.

- ELMARC also had received complaints in January 2004 that Surgicoin was affiliated with Naresh Grover, a businessman reprimanded by the Bank in October 2003 for engaging in fraudulent practices.302

- Delta Medical Appliances’ bids for contracts to supply infant phototherapy units, baby incubators, and radiant baby warmers included “certificates” that purported to demonstrate the equipment’s compliance with IEC 60601 and Indian national standards. However, both documents only explained the applicable standards; they did not state that Delta’s equipment complied with them. Despite these obvious documentary flaws, ELMARC awarded these contracts to Delta Medical. As noted previously, the biomedical engineer assisting the DIR found that all three types of equipment were defective to an extent that potentially could endanger the infants and medical staff who use them.

The DIR identified all these issues solely by visually inspecting bid documents and performing basic internet searches. Yet the DIR obtained no information suggesting that ELMARC identified these issues. This failure and the frequency with which these apparent frauds occurred are indicators of ELMARC’s possible participation in fraud on the project.

2. Suppliers Frequently Provided Non-Functional Equipment

At 12 hospitals, medical officials informed the DIR that some OHSDP-provided equipment was non-functional upon delivery. As with non-compliant and dangerous equipment, ELMARC’s failure to properly inspect these units may have been caused by a lack of capacity of poor performance, but the problem’s high frequency rate makes it an indicator of fraud and corruption.

The most frequently non-functional unit of procured equipment was Surgicoin’s operating theater lights, which the DIR found to be partially or completely non-functional—as a result of damage, poor installation, or non-durable components like light bulbs that rapidly burnt out—in 65 percent of the hospitals it visited.303

Other examples of the provision of non-functional equipment include the following:

302 Narutek letter to World Bank, New Delhi (Jan. 24, 2004); AMG International letter to OHSDP Project Director (Jan. 24, 2004).
303 Such non-functionality was observed in 36 of the 55 DIR-visited hospitals.
- At DHH Malkangiri, the x-ray machines were missing power cables and the delivery table was broken when delivered.
- At AH Kesinga, the fetal monitors were broken when delivered.
- At DHH Sundargarh, the bacteriological incubators were broken when delivered.
- At CHC-I Banapur, DHH Dhenkanal, and DHH Rayagada, the baby incubators were non-functional upon delivery.

Medical officers stated that they accepted the non-functional equipment for varying reasons. Medical officers at DHH Koraput told the DIR that they believed they had no choice but to accept the delivered equipment. Medical officers at DHH Malkangiri told the DIR that they accepted non-functional equipment on the promise—never fulfilled—that the equipment would be repaired quickly. And medical officers at DHH Sundargarh stated that they accepted non-functional equipment both because they were promised repairs within a week (which did not occur) and because they felt they had to accept the equipment as delivered.

3. Equipment Often Was Not Installed Properly

Under its contract extension of August 3, 2001, ELMARC was responsible for monitoring and responding to installation issues. This obligation was later expanded to include ensuring and verifying equipment installation. Yet despite this contractual responsibility, at 43 hospitals the DIR observed equipment that was installed poorly or not at all. EIF installation problems were noted in the Bank’s December 2005 supervision mission Aide-Mémoire, but the DIR’s observations suggest that nothing was done to resolve the issue. The widespread EIF installation failures observed by the DIR are an indicator of fraud and corruption because, while they may be explained by poor capacity, poor performance, or external factors, they are consistent with the possibility that ELMARC was more interested in procuring equipment—and thus collecting fees and/or kickback payments from suppliers—than in ensuring that the procured equipment was used for its intended purposes.

The DIR’s observations of poor installation or non-installation of OHSDP-procured equipment included the following:

- At DHH Nawarngpur, the autoclaves were installed without power plugs.

304 ELMARC 2001 Contract, appx. A; ELMARC letter to OHSDP Project Director (July 24, 2006).
305 December 2005 Aide-Mémoire, p. 5.
- At DHH Malkangiri, a bacteriological incubator’s power cables and plugs were not grounded.

- At CHC-I Sohella, the autoclave was not properly grounded, and because the power rating of the electrical supply circuit was too low, the entire hospital’s electrical system tripped and shut down if the autoclave was used.

- Air conditioning units were improperly installed at CHC-I Balipatna, CHC-II Bangurigaon, CHC-I Banapur, AH Baramba, DHH Dhenkanal, CHC-I Hindol, SDH Kamakhanagar, AH Kantamal, AH Podagada, SDH Talcher, and AH Umarkote.

- The water distillation unit was not connected at CHC-II Bijipur, SDH Jeypore, AH Kesinga, CHC-II Manamunda, CHC-II Pottangi, or CHC-I Soro. (See Photograph 82 on page 317.)

- X-ray machines were installed inadequately (i.e., in a manner inhibiting their operation) or not at all in CHC-I Banapur, AH Bolagarh, CHC-II Rairakhol, DHH Sambalpur, and DHH Sundargarh.

The DIR also witnessed the tangible effect that this equipment non-installation has on the OHSDP’s development goal of improving health services in Orissa. At AH Bolagarh, the DIR met a 70-year-old woman who had fallen and injured her hip the prior day. Because the hospital’s x-ray machine was not installed, the local surgeon had to send her to a private x-ray facility 20 kilometers away over rough roads. She and her son made the trip by auto-rickshaw and returned with the x-ray film for the surgeon to diagnose. The surgeon informed her that she had made the trip—which she described as agonizing—by traveling on a fractured hip. (For further examples of uninstalled equipment, see Photographs 83–85 on page 318–319.)

4. Equipment Was Oversupplied

In 25 hospitals, the DIR observed that EIF items procured under the OHSDP were provided in volumes that appeared much larger than the hospitals’ needs. This observation is consistent with the findings of earlier OHSDP reviews, including the Government of Orissa’s 2005 audit report, which noted procurement of EIF
items in excess of project plans totaling INR 125.3 million (USD 2.8 million); and
the 2006 Joint Survey of Status of Project Equipment, which noted oversupply of
phototherapy units, executive chairs, and steel cupboards. It is possible that such
oversupply resulted from poor needs estimation by ELMARC and the PMC. How-
ever, the volume and value of the oversupplied goods are so large that they suggest
that ELMARC may have intentionally procured excess EIF, which is an indicator
of fraud and corruption.

As a result of this oversupply, much of the procured EIF items observed by the
DIR were in storage. For example, the DIR observed 22 sites in which furnish-
ings—such as executive chairs, executive tables, floor-mounted grouting chairs,
and stainless steel stools—were left in storage. Oversupply was not limited to fur-
niture: in half the hospitals it visited, the DIR observed baby incubators unused
or in storage. Further, at some hospitals the oversupply was so great that the
staff stored excess EIF items in areas designated for patient treatment, thus directly
impeding the project’s development goal of promoting the treatment of a higher
number of patients. In AH Podagada and CHC-II Majhapada, excess executive
chairs were stored in wards that otherwise would be used for patients, while in
DHH Nabarangpur, two excess desks were stored in the operating theater. (See
Photographs 86–88 on pages 319–320.)

The Government of Orissa’s 2005 audit report identified Surgicoin as the firm
most frequently involved in oversupply. It supplied 1,486 extra suction apparatuses,
10 extra surgical diathermies, 24 extra operating theater lights, 249 extra
delivery tables, and 1,478 extra diagnostic sets for a total price of INR 9.52 million
(USD 212,000).

5. The Hospitals Lacked Personnel with the Skills or Training to
Operate Provided Equipment

ELMARC’s August 3, 2001, contract extension required it to monitor and
respond to issues regarding equipment training. Despite this requirement, at 16
different hospitals medical officers informed the DIR that equipment had been

inafter 2005 Orissa Civil Audit); 2006 Joint Survey of Status of Project Equipment, annex. 9 and 10 (hereinafter
307 This apparent oversupply was observed in 28 of the 55 hospitals visited. The calculation excludes non-func-
tional equipment.
308 2005 Orissa Civil Audit, appx. XXVI.
309 ELMARC 2001 Contract, appx. A.
provided without adequate training and as a result was not used.\textsuperscript{310} In some hospitals procured equipment was still in its packaging, indicating that the supplier had not given even a basic demonstration on its use. This lack of training was noted as an issue in the Bank’s December 2005 supervision mission \textit{Aide-Mémoire} and the 2006 Joint Survey of Status of Project Equipment, but the DIR did not find any indication that ELMARC had taken steps to address it.\textsuperscript{311}

Similarly, at nine hospitals staff told the DIR that equipment was unused because the hospital lacked personnel qualified to utilize it in their work.\textsuperscript{312} The most prominent example was a lack of laboratory technicians to operate pH meters, spectrophotometers, and flame photometers, as well as a lack of technicians to operate electro-physiotherapy units and cystoscopes. Like the lack of equipment training, the Bank noted the disjunction between the state’s medical staff resources and equipment procurement levels in its project supervision reports, but the issue was never resolved.\textsuperscript{313}

Viewed in isolation, neither of these issues is an indicator of fraud and corruption because both can be explained by a lack of capacity in Orissa and a lack of diligence by ELMARC and its suppliers. However, when viewed in the light of ELMARC’s apparently poor equipment inspection, poor installation supervision, and oversupply of EIF, these issues further suggest that ELMARC may have procured goods principally for the sake of procuring them, which is an indicator of fraud and corruption.

\textsuperscript{310} These hospitals and complaints were: AH Aska (no training in use of neonatal equipment); CHC-II Bangurigaon (no training in use of neonatal equipment); CHC-I Banapur (no training in use of neonatal equipment); CHC-II Bijipur (no training in use of radiant warmer); AH Bolagarh (no training in use of fetal monitor); DHH Dhenkanal (no training in use of baby incubator or cystoscope); CHC-II Garposh (no training given for any equipment); SDH Jeypore (no training in use of baby incubator); CHC-II Kanpur (no training in use of neonatal equipment); DHH Koraput (no training in use of waste autoclave, water distillation unit, or x-ray machine); DHH Malkangiri (no training in use of neonatal equipment); DHH Nawarangpur (no training in use of waste autoclave, cystoscope, or laboratory equipment); DHH Rayagada (insufficient training in use of lab equipment); CHC-I Sohella (no training in use of baby incubator); CHC-II Soro (no training in use of neonatal equipment); and AH Umarkote (no training in use of neonatal equipment).

\textsuperscript{311} December 2005 \textit{Aide-Mémoire}, p. 5; 2006 Joint Survey, annex 9.

\textsuperscript{312} Medical staff informed the DIR of these personnel shortages at: CHC-II Bangurigaon (no anesthetist); AH Bolargh (no anesthetist); DHH Jagatsinghpur (no technician for waste autoclave); SDH Kamakhyanagar (no x-ray technician); DHH Koraput (suffering from ”serious staff shortages”); DHH Malkangiri (11 of 15 specialist posts vacant); DHH Nawarangpur (no anesthetist or general surgeon); CHC II Pottangi (no technician for autoclave); and CHC-I Sohella (no anesthetist).

\textsuperscript{313} \textit{See}, e.g., World Bank Operations Advisor letter to OHSDP Project Director (Aug. 13, 2004) (refusing to provide additional equipment because the shortage of manpower in Orissa hospitals has not been adequately addressed); 2006 Joint Survey, annex 9 (noting that the cystoscopes were idle because of lack of trained and experienced staff).
6. ELMARC and Its Suppliers Did Not Respond to Equipment Quality Complaints

Finally, the DIR learned that at least eight medical officials had complained to the PMC and/or ELMARC and its suppliers about EIF-related problems but received no response. For example, medical officials told the DIR that:

- At DHH Jharsuguda, ELMARC never responded to requests to repair non-functional baby incubators.

- At DHH Nawarangpur, an autoclave had to be repaired locally because the supplier did not respond to repair requests.

- At DHH Malkangiri, suppliers did not respond to requests to repair an autoclave and ultrasound machine (the latter had required three repairs before the supplier refused to do additional repair work, despite its still-valid warranty). A supplier of a malfunctioning microscope also told a Malkangiri medical officer that the officer could not expect to receive a functioning microscope for the price that had been paid.

- At DHH Dhenkanal, DHH Puri, CHC-I Sohella, and DHH Sundargarh, Surgicoin never replied to complaints regarding non-functional operating theater lights.

As with lack of personnel and training, there are many possible reasons why these firms did not respond to medical officers’ complaints. But such non-responsiveness is consistent with the possibility that ELMARC was profiting from the OHSDP through fraud and corruption rather than high service quality.

The DIR identified six indicators that ELMARC and its suppliers may have engaged in fraud and corruption in the implementation of the OHSDP’s EIF components. As detailed below, the DIR also found indicators of fraud and corruption in EIF procurement that are consistent with those identified in EIF implementation.

C. Indicators of Fraud and Corruption in EIF Procurement

ELMARC conducted EIF procurement in five phases between 1999 and 2006. In total, the firm awarded 183 contracts worth approximately INR 547 million
(USD 12.1 million)—more contracts in number and value than any other OHSDP PSA or CMC.\textsuperscript{314} Most of this procurement occurred in just one year: in 2004, ELMARC awarded approximately 100 contracts (54 percent of its total) worth INR 350 million (USD 7.8 million; 64 percent of its total) to provide EIF for a large group of hospitals whose delayed civil works were all nearing completion.\textsuperscript{315}

The DIR reviewed the bid documents for 33 EIF contracts that regarded a range of equipment types. The DIR selected these contracts because they had been identified as potentially problematic by complaints, the 2006 Joint Survey of Status of Project Equipment, or the DIR’s indicator-driven contract data searches. In addition to the technical certificate fraud and oversupply problems detailed above, the DIR’s document reviews identified three other indicators of fraud and corruption tainting these procurements.

1. \textit{ELMARC Treated Bidders Inconsistently}

ELMARC awarded contracts to 84 different firms, but 12 firms received 58 percent of these contracts (by value). The DIR’s review of documents regarding some of these firms’ procurements found that ELMARC treated their bids more favorably than those of other firms, indicating bid rigging.

For example, Vishala Industrial Craft was the fifth-most-successful bidder for ELMARC-awarded contracts, receiving six contracts worth INR 24.4 million (USD 538,000).\textsuperscript{316} In a tender for a contract to supply conference tables, ELMARC initially found Vishala’s bid to be non-responsive because the firm’s test certificates lacked required information. Two other bidders, Samar Steel Industries and Rial Systems, were disqualified for similar omissions. But ELMARC permitted Vishala alone to supplement its bid with additional information and, because of this supplementation, Vishala won the contract.

Similarly, Royal Safe Company was the fourth-most-successful bidder for ELMARC-awarded contracts, receiving four contracts worth INR 28.8 million (USD 638,000). In each of these tenders, ELMARC awarded Royal Safe furniture contracts despite initially declaring its bids non-responsive.\textsuperscript{317}

\textsuperscript{314} These figures are based on PMC contract data. U.S. Dollar equivalent values calculated using the daily exchange rate on the date of the contract.
\textsuperscript{315} Mid-Term Aide-Mémoire, p. 7 (EIF procurement timed with civil works completion).
\textsuperscript{316} The U.S. Dollar equivalent value calculated using the daily exchange rate on the date of contract.
\textsuperscript{317} These contracts are OHS邳/MARC/011-42/WB/P3/NCB/NOA/1051 (EIF-54-Ph4); OHS邳/MARC/011-42/WB/P3/NCB/NOA/1055(EIF-54-Ph4); OHS邳/MARC/011-42/WB/P3/NCB/NOA/1038 (EIF-35-Ph4); and OHS邳/MARC/011-42/WB/P3/NCB/NOA/1040(EIF-37).
The DIR found indications that PMC and ELMARC officials gave preferential treatment to other firms as well. For example, Variety Vayapar bid for a contract for autoclaves and failed to provide full supporting documentation. Based on this failure, ELMARC initially found the firm’s bid non-responsive, but the Bid Evaluation Report states that this decision was overturned by other members of the Bid Evaluation Committee and Variety Vyapaar won the contract. Similarly, ELMARC awarded Equipement de Chandigarh a contract to supply stainless steel stools despite the fact that: (1) Equipement de Chandigarh’s bid omitted required product conformity reports; and (2) two other firms submitted lower priced bids.

Consistent with the DIR’s EIF implementation and procurement findings, at least 11 firms complained about bid rigging and corruption in ELMARC’s EIF procurements. These complaints included the following:

- A confidential witness informed the DIR that a relative of an OHSDP official involved in equipment procurement won contracts to provide furniture to the OHSDP.
- Three firms submitted complaints regarding Narayan Industries’ contract to provide autoclaves. First, a September 27, 2003, complaint alleged that Narayan had bribed ELMARC and OHSDP officials to pass its substandard equipment through inspection. Second, a January 27, 2004, complaint from Hospital Equipment Corporation alleged that Narayan and Variety Vayapar submitted forged performance certificates so that their autoclaves could pass inspection, and that ELMARC provided them with other bidders’ prices and an opportunity to amend their already submitted bids. Third, an April 7, 2004, complaint from Indian Instruments alleged that Narayan paid a 20 percent bribe for an autoclave contract, provided forged performance certificates, failed to produce pressure test certificates, and used poor-quality steel in its autoclaves. These complaints’ allegations are consistent with the biomedical engineer’s observations that Narayan and Variety’s autoclaves suffered from dangerous manufacturing and design defects.

320 (Illegible) letter to OHSDP Project Director (Sept. 27, 2003). This complaint was not forwarded to the World Bank’s Department of Institutional Integrity (INT).
321 Hospital Equipment Corporation letter to OHSDP Project Director (Jan. 27, 2004). This complaint was forwarded to INT.
A September 20, 2004, complaint from Hintek International alleged that ELMARC was accepting fake performance and test reports. This is consistent with the DIR’s findings.

A November 18, 2004, complaint from Vinar Systems alleged, among other things, that ELMARC awarded Vishala Industries and Royal Safe Company furniture contracts in exchange for a bribe and that Vishala and Royal Safe’s bids lacked performance certificates.

A November 27, 2004, complaint from Samar Steel Industries alleged that ELMARC’s Deputy General Manager of Procurement and OHSDP officials accepted bribes from non-responsive bidders—including Vishala Industrial Craft—in exchange for accepting forged documentation and ensuring that substandard goods passed inspection.

The DIR cannot conclude that these complaints’ allegations are accurate because determining their legitimacy would require a full investigation into the facts of each complaint. However, the complaints are consistent with the DIR’s own findings regarding project procurement and implementation and thus serve as a further indicator of fraud and corruption affecting the OHSDP.

2. ELMARC Added Accessories to Equipment Contracts, and Thus Increased Their Value, After the Contracts Were Awarded

ELMARC’s OHSDP contract provided that, “[t]he requirement of consumables, accessories and spares necessary … and the [sic] estimating the cost of the consumables, accessories and spares will be made at the time of preparing the specifications of the equipment.” Despite this provision, ELMARC approved the addition of accessories to four Delta Medical Appliances contracts for the supply of phototherapy units, emergency resuscitation kits, baby incubators, and radiant baby warmers. These accessories increased Delta’s contract values by more than INR 5 million (USD 111,000), and the DIR found no indication that any other firm received a similar opportunity to add accessories to a contract. Further, the DIR’s
field visits suggested that Delta did not supply all the accessories that were added to its contracts.

Thus, ELMARC uniquely approved a significant increase to the value of four Delta Medical contracts, appears to have received little compliant EIF items in return, and did so in a manner that violated the provisions of its own consulting contract. This could be the result of poor performance, but given the numerous other indicators that ELMARC engaged in fraud and corruption, these unusual contract value increases are another indicator of fraud.

3. Other ELMARC Actions Suggested Participation in Procurement Fraud

Two other incidents further suggest that ELMARC may have participated in procurement fraud in conjunction with some of its suppliers. First, in February 2004 the West Bengal DOHFW sent ELMARC a letter warning the firm that Surgicoin’s operation theater lights had “major defects,” including that its bulbs frequently fused.328 ELMARC also was copied on a January 2004 complaint alleging that Surgicoin was linked to Naresh Grover, an Indian businessman whom the Bank had sanctioned in October 2003 for fraudulent practices.329 Despite these warnings, on July 15, 2004, ELMARC awarded Surgicoin an INR 5.4 million (USD 120,000) contract for operating theater lights. ELMARC therefore appears to have awarded a contract to a firm that it knew would provide a poor-quality product.

Second, in May 2005 the PMC tasked ELMARC with reviewing the provision, installation, and use of equipment supplied under the OHSDP. The Bank’s December 2005 supervision mission Aide-Mémoire expressed “serious reservations” about the report’s accuracy, and the Chief Medical Officers at DHH Nawarangpur and DHH Koraput told the DIR that ELMARC’s review consisted only of an inventory of the equipment stock at their hospitals.330 In addition, Dr. David Porter, who participated in the review on behalf of the Bank, informed the DIR that during the 2006 Joint Equipment Survey, ELMARC engineers admitted to him that senior ELMARC management had instructed them to falsify information in order to provide a more positive view of the project’s progress.331

329 AMG International letter to OHSDP Project Director (Jan. 24, 2004).
330 December 2005 Aide-Mémoire, pp. 4 and 16.
331 The Joint Equipment Survey focused on equipment provision and usage statistics and presumed that ELMARC conducted proper equipment inspections and compliance certificate reviews. In contrast, the DIR independently examined a selection of equipment in great detail, including deconstructing items of equipment to determine their compliance with project technical specifications. The DIR therefore identified some of the same issues as the Joint Equipment Survey, but also noted many issues not identified by the survey.
The acceptance of substandard, dangerous, and non-functional equipment, combined with false certifications, oversupply, frequent installation failures, and a lack of responsiveness to multiple complaints suggest a collusive fraudulent scheme between ELMARC and various suppliers. While some of the problems observed might be the result of a lack of capacity, there are many indicators that ELMARC was more concerned with preferential treatment of favored contractors than with procuring high-quality equipment and ensuring its effective use.

Project Audit Reports

Under the OHSDP, when the Government of India received funds from the Bank, it deposited them into a special account in the national treasury and then disbursed some of its own funds to the Government of Orissa as a national budget item for “additional central assistance, on standard terms and conditions.” The DOHFW requested funds for the project as part of its annual budget and, upon the budget’s approval, the Government of Orissa allocated a credit to a set of project accounts in the state treasury—including a personal ledger account (PLA)—from which the DOHFW could make project-related payments. When the project actually expended funds, it submitted Statements of Expenditure to the Government of India, which in turn withdrew Bank funds from its special account and requested replenishment from the Bank. The DOHFW’s annual expenditures were examined by the Orissa Accountant General which, pursuant to standard state accounting practice, certified (to the extent possible) each year’s expenditures as accurately reported and used for project purposes.

The DIR’s review of the Auditor General’s audit reports identified a number of project financial management and financial recordkeeping issues: (1) the project’s audits did not provide a full and transparent accounting of project expenditures; (2) the project’s budget allocations repeatedly greatly exceeded its actual expenditures; (3) the project’s certified civil works spending is inconsistent with the PMC’s reported civil works activity; and (4) project financial records suffered from accounting inadequacies. These issues create risks of fraud and corruption.

332 OHSDP PIP, p. 39.
333 Ibid.
A. State Auditing Techniques Did Not Provide a Timely, Transparent, and Complete Overview of Project Expenditures

Pursuant to standard practice in Orissa, each year’s audit analyzed and certified only funds allocated and spent in that year. Annual audits did not examine previous years’ unspent allocations or the project’s total account balances. As the auditors themselves noted, the absence of such an overall financial picture facilitates fraudulent transactions.\textsuperscript{335} The Bank attempted to remedy this lack of information through supplemental audits of previously uncertified funds, but these also failed to account for all project funds. For example, a 1999–2003 supplemental audit reviewed INR 843.0 million (USD 18.7 million) in previously uncertified expenditures but could certify only 42 percent of them; INR 492.5 million (USD 10.9 million) in expenditures remained uncertified.\textsuperscript{336}

Because of these methodological limits, to date the Bank has not obtained information sufficient to determine whether the PMC used project funds solely for their intended purposes. The Bank’s Financial Management unit has noted an INR 1,233,900,000 (USD 30.84 million) gap between the project expenditures reimbursed by the Bank and the amount of expenditures certified by the Auditor General; much of this gap stems from the expenditure of PLA allocations that were reported unspent during the year of their allocation and then never revisited in subsequent audits.\textsuperscript{337} The Bank has requested a supplemental audit on these issues and stated that it will seek a refund for any unaudited or uncertified reimbursements.\textsuperscript{338} However, the insufficient transparency of project accounts creates a risk of fraud and corruption, and this lack of transparency was accompanied by other project financial management problems.

B. The Project’s Requested Budget Allocations Often Far Exceeded Its Actual Expenditures

The Orissa Accountant General’s audit reports state that the PMC frequently requested funding allocations far larger than the sums it actually expended. In some years, the auditors reported that the PMC disbursed little or no money at all


\textsuperscript{336} Ibid., p. 1.

\textsuperscript{337} P. Kudesia letter to R.N. Senapati (Oct. 3, 2007). The U.S. Dollar equivalent is stated in the letter.

\textsuperscript{338} Ibid.; P. Kudesia letter to the Director General of Health Services, Orissa Directorate of Health and Family Welfare (Oct. 19, 2007).
on equipment and civil works. These discrepancies raise questions regarding the PMC's financial management practices.

- Between 1999 and 2003, a supplemental audit certified expenditure of INR 830.0 million (USD 18.4 million) for civil works—80 percent of the PMC’s civil works PLA allocations—and INR 289.6 million (USD 6.4 million) for equipment, furniture, and medicine—62 percent of such allocations. INR 360.4 million (USD 8 million) in PLA allocations were not spent.

- In its 2002–2003 project audit, the Accountant General certified only 42 percent of allocated project funds—INR 216.3 million (USD 4.8 million)—as expended, with INR 272.6 million (USD 6 million) reported unspent. In addition, the government certified only 40 percent of allocated civil works funds—INR 177.8 million (USD 3.9 million)—as spent, and EIF spending was not discussed in the audit.

- In its 2003–2004 project audit, the Accountant General certified only 5 percent of allocated project funds—INR 35.3 million (USD 784,000)—as expended. None of the INR 497.7 million (USD 11 million) allocated for civil works was spent, and only 9 percent of allocated equipment funds—INR 10.5 million (USD 234,000)—was spent. Further, only INR 9,110 (USD 200) was spent on equipment maintenance, which was 9 percent of the project's INR 100,000 (USD 2,200) allocations for the work.

- In its 2004–2005 project audit, the Accountant General certified 70 percent of allocated project funds—INR 346.7 million (USD 7.7 million)—as expended. No funds were spent on civil works, but the project spent INR 168.4 million (USD 3.7 million) on equipment, which constituted

---

339  1999–2003 Balance Audit Report, p. 1 and Statement-III. During these years, the PMC withdrew INR 1,025,636,600 (USD 22.8 million) for civil works and INR 467,914,682 (USD 10.3 million) for medicine, furniture, and equipment. Certified expenditures are those that the auditors, based on project accounts and records, verified to have occurred.

340  Ibid., p. 3.


342  Ibid. The project withdrew INR 450 million (USD 10 million) for civil works in 2002–2003.


344  Ibid., p. 2. The project withdrew INR 120,000,000 (USD 2.7 million) for equipment in 2003–2004.

345  Ibid., p. 3.

66 percent of its equipment funding allocation. INR 85.9 million (USD 1.9 million) in equipment allocations went unspent.

The Accountant General’s 2005–2006 project audit report revealed that the project used some of its unspent allocations during its final year: the project spent 99 percent of its civil works allocation (INR 160,080,734 (USD 3.6 million)) and 343 percent of its medicine, equipment, and furniture allocation (INR 218,520,222 (USD 4.8 million)). However, the Auditor General stated that the PMC’s practice of requesting and receiving far larger allocations than the project needed—and then leaving unspent allocated credits in project accounts—is a violation of state government policy but was done for years with “the concurrence of the Finance Department of the State Government.”

C. Certified Expenditures Do Not Correspond to Reported Civil Works Activity

OHSDP contractors were paid in installments made upon either the submission of certified monthly payment certificates or the achievement of certain construction and renovation benchmarks. Project expenditure on civil works should, therefore, roughly follow project civil works progress. However, the OHSDP audit reports’ expenditure statements are inconsistent with the project’s stated civil works activity levels: spending was highest when little work was done and lowest when work was most active.

Between 1999 and 2003 the audit reports certified that the project expended USD 18.4 million for civil works, but this time period was marked by substantial project delays: only 16 sites were completed by the 2002 mid-term project review, and only 63 were completed by the Bank’s May 2003 project supervision mission. Conversely, between May 2003 and July 2005, the PMC reported the completion of 74 additional hospitals, but the Orissa Auditor General certified that the PMC disbursed only USD 3.9 million for civil works between 2002 and 2003 and noth-

---

347 Ibid., p. 2. The project withdrew INR 254,300,000 (USD 5.6 million) for equipment in 2004–2005.
348 Ibid., p. 3.
349 Office of the Principal Accountant General (Civil Audit), Orissa: Bhubaneswar, Audit Certificate, pp. 2 and 5 (Apr. 26, 2007) (hereinafter 2005–2006 Audit Certificate). The audit report states that the project received funding allocations of INR 161,700,000 (USD 3.6 million) for civil works and INR 63,600,000 (USD 1.4 million) for medicine, equipment, and furniture.
351 See, e.g., Contract between OHSDP (SCAG) and R.V.R. Projects Pty. Ltd. (June 26, 2002) (Bates 75969) (monthly payment); Contract between OHSDP (IDCO) and Orissa Bridge and Construction Corporation Ltd. (Sep. 3, 2001) (Bates 42437) (payment upon benchmark completion).
352 1999–2003 Balance Audit Report, p. 3; Mid-Term Aide-Mémoire, pp. 3 and 6; May 2003 Aide-Mémoire, pp. 3–4.
ing between 2003 and 2005. This pattern shifted in the project’s final year, during which the PMC spent 99 percent of its civil works allocation (INR 160,080,734 (USD 3.6 million)). However, no audit reports detail any PMC spending of previously allocated but unspent funds, leaving previous discrepancies unresolved. The disjunction between certified PMC expenditures and PMC activity reports indicates either that the activity reports overstated actual project activity, or that the audit reports’ expenditure statements failed to capture substantial amounts of PMC spending, which creates a risk of inappropriate expenditures.

D. Audits Identified Additional Financial Record-Keeping Issues

Over the course of the OHSDP, the government’s audits identified other financial record-keeping discrepancies that create a risk of fraud and corruption. These included the following:

- Between 1999 and 2003, the project did not maintain monthly or annual closing balances in its cash books, nor did it reconcile those books with treasury records. The government auditors stated that this situation was “fraught with risk of fraudulent withdrawals remaining undetected.”

- In 2003–2004, the auditors noted a continued lack of balances in project accounts and concluded that this had facilitated the diversion of unspent Bank funds: “Such a situation helped the Project Authorities for unauthorized expenditure without sanction of the Government by diverting the unspent balances towards some other purposes, which is irregular. Moreover, such a situation is fraught with risk of fraudulent withdrawals remaining undetected.”

- In 2004–2005, the auditors noted an 8 percent discrepancy, totaling INR 38.5 million (USD 855,000), between the project’s allocation records and the Accountant General’s allocation records. This issue recurred in

---

355 Ibid., p. 3.
356 Ibid.
357 Ibid., pp. 3–4.
358 Project Director letter to P. Kudesia, p. 2 (July 21, 2005).
2005–2006, in which the auditors noted an INR 8,274,361 (USD 183,874) discrepancy between the two sets of records.\textsuperscript{360} This further suggests inadequate record keeping.

E. The Bank Responded to Audit Report Issues

Correspondence indicates that the Bank’s financial management unit was diligent in following up on audit reports, requesting clarifications regarding the issues noted by the auditors, requesting deductions of disallowed expenditures from future project reimbursement claims, and pursuing the project’s overdue supplemental audit reports.\textsuperscript{361} The Bank’s supervision missions also noted when audit reports were overdue or identified financial management issues, and they pursued audit report delivery, occasionally through the suspension of statement-of-expenses-based disbursement.\textsuperscript{362}

Financial management staff informed the DIR that the Bank now requires project auditors to account for project finances as a whole and has begun to impose detailed auditing standards on project auditors through the use of standardized terms of reference. These steps may help prevent inadequate record keeping in the future.

Project Reports and Assessments

In order to evaluate the effectiveness of the Bank’s supervision of the OHSDP, the DIR reviewed the Bank’s project supervision documents and compared their statements with the DIR’s findings. The DIR found that although the Bank observed many of the same fraud and corruption indicators as the DIR, its low-volume procurement reviews and Borrower-reliant supervision methodology appear to have caused it to make these observations at a time and in a manner that deterred effective remedial action. Further, the Bank’s statistics-based project evaluations appeared to obscure the implementation problems observed by the DIR.

\textsuperscript{361} See, e.g., Financial Management Specialist R. Narula letter to OHSDP Project Director (June 6, 2000); Senior Financial Management Specialist M. Jain letter to Project Director C.T.M. Suguna (Dec. 20, 2001); Senior Public Health Specialist P. Kudesia letter to OHSDP Project Director M. Panigrahi,\textit{ passim} (July 5, 2005); Senior Financial Management Specialist M. Gopalakrishnan letter to Orissa Department of Finance Principal Secretary C. Basu,\textit{ passim} (June 21, 2007); P. Kudesia letter to the Director General of Health Services, Orissa Directorate of Health and Family Welfare (Oct. 19, 2007).
\textsuperscript{362} See, e.g., October 2003 \textit{Aide-Mémoire}, p. 4; July 2005 \textit{Aide-Mémoire}, p. 6; December 2005 \textit{Aide-Mémoire}, p. 8; March 2006 \textit{Aide-Mémoire}, p. 8.
A. Procurement Post-Reviews

According to the documents made available to the DIR, the Bank conducted four procurement post-reviews of the OHSDP—three reviews during project supervision missions in 2002 and 2004 and one 2006 post-review of a sample of contracts awarded between April 2004 and March 2005. In total, these reviews encompassed only 11 percent of the civil works, EIF items, and drugs and materials contracts awarded under the OHSDP. The reviewed contracts included one design and supervision consulting contract, seven hospital construction contracts, and 46 contracts to supply EIF goods, including one generator.

The post-reviews focused on documentary completeness and procedural compliance with applicable Bank guidelines. Indicators of fraud and corruption were observed only as a corollary to this task. The reviews also did not involve site visits other than those performed during the Bank’s general supervision missions. In total, the reviews identified only six indicators of fraud and corruption, and no documents produced to the DIR suggest that these indicators were addressed further. In contrast, the DIR observed multiple indicators of fraud and corruption at every level of project procurement.

The 2002 mid-term review mission post-review analyzed three contracts and “found the documentation satisfactory.” Similarly, the December 2004 mission post-review examined 25 EIF and drugs contracts and found all but one to be acceptable. The only problem noted was that on one drugs contract, no order was placed because the government found no bidder qualified.

The Bank’s two other post-reviews were more successful at identifying indicators of fraud and corruption. In its May 2004 supervision mission review, the Bank noted that “some deviations … in civil works contracts in respect of pre-bid minutes, qualification of the bidder and the bank certificate towards liquidity and assets requirements.” The DIR identified all these issues as indicators of bid

---


364 According the PMC contract records, the OHSDP awarded 502 contracts. The Bank’s various post-reviews analyzed 54 of them. See Mid-Term Aide-Mémoire, p. 7 (post-review of two contracts); May 2004 Aide-Mémoire, p. 5 (post-review of three contracts); December 2004 Aide-Mémoire, p. 13 (post-review of 25 contracts); April 2006 Post-Review, p. 2 (post-review of 24 contracts).

365 Ibid.


367 Mid-Term Aide-Mémoire, p. 7.


369 May 2004 Aide-Mémoire, p. 5.
rigging. However, while the May 2004 Aide-Mémoire stated that the Bank would pursue these issues in future correspondence, the DIR was not given and could not otherwise locate any such correspondence.370

Similarly, the Bank’s 2006 post-review noted delays in the procurement process for four drug contracts and orders “mailed outside of [bid] validity” for 14 other contracts.371 In one case, the review noted that there was a 44-day delay between the closing of the bidding period and the Bid Evaluation Committee’s (BEC’s) bid opening.372 The BEC then further delayed its evaluation of submitted bids until three months and 14 days after bid closing.373 In the end, only 64 bids were received out of the 98 bid documents sold, and 14 of these were declared non-responsive, leaving only 50 bids to consider.374 The review also noted that two bidders in this tender quoted identical prices.375

All these observations are indicators of bid rigging and/or collusion. But the DIR obtained no documents suggesting that the Bank took action to further examine and address these issues. Further, all these problems were identified in drug contracts procured by local government. The 2006 post-review did not identify any problems in the civil works and EIF procurements that it reviewed.376 Accordingly, the 2006 review recommended giving ELMARC responsibility for the drug contract procurements conducted by the local government.377 In contrast, the DIR found strong indicators that ELMARC engaged in fraudulent schemes with its suppliers that resulted in the supply of technically non-compliant and occasionally hazardous medical equipment.

B. Project Supervision

As detailed in this chapter’s introduction, the Bank’s project design documents did not consider fraud and corruption as a risk to the project’s success. The Bank’s supervision activities eventually observed and documented some of the civil works and EIF implementation issues identified by the DIR, but these observations began in December 2004, when the Bank’s supervision mission noted that some hospitals lacked electricity, running water, and might not be completed by project closure.378
Indeed, the project supervision documents indicate that the Bank began to comprehend the full extent of these problems only in mid-2005, when the Bank's architect, Rakesh Sahni, and biomedical engineer, Dr. David Porter, reported the results of their multi-hospital field visits. By this time the project had been extended twice and would close in less than a year, providing little time to remedy noted implementation deficiencies.

The late discovery of significant implementation quality issues suggests a weakness in the project’s supervision structure. Yet in November 2001, the Bank’s Quality Assurance Group (QAG) reviewed the OHSDP and graded the project’s supervision design highly satisfactory. This positive evaluation of an apparently flawed process and the Bank’s delay in conducting detailed field studies appear related to the Bank’s overall approach to project supervision.

The OHSDP PAD, PIP, Project Agreement, and Credit Agreement detailed many supervision activities to be conducted by the Borrower but provided no details at all about how the Bank would supervise the highly decentralized project activities. This is consistent with the Bank’s policy of delegating detailed project monitoring and evaluation to the Borrower as a capacity-building opportunity.

Under the Bank’s operational directives and operational policies, the Borrower’s project management team bears the responsibility of: (1) continually assessing project implementation against agreed-upon schedules; and (2) evaluating the project’s performance, efficacy, and impact against stated objectives during and after project implementation. The Bank, in turn, attempts to identify and mitigate risks in its project designs and then supervises the Borrower’s activities to ensure that the project is implemented effectively. The Bank’s procedures state that supervision involves regularly monitoring the project against PAD and PIP targets, objectives, and indicators; monitoring and recommending improvements to procurement and funds disbursement; reviewing Borrower audit and progress reports; evaluating compliance with loan covenants; and assessing risks to the project’s successful implementation, operation, and sustainability. The Bank’s supervision guidelines further emphasize that project supervision should be continuous and responsive to changing project needs and operating environments.

380 QAG Review, pp. 3 and 14.
382 Ibid., paras. 2–3.
383 Operational Policy 13.05 (July 2001).
384 Bank Procedure 13.05, para. 9 (July 2001).
385 World Bank OPCS, Guidelines for Project Supervision, paras. 2–3 (Mar. 16, 2004).
However, the Bank’s supervision remains reliant, at least in part, on the Borrower. For example, while the Bank’s supervision guidelines emphasize that “[g]ood supervision reports are critical for the Bank[,]” for capacity-building and cost-savings reasons the guidelines recommend that the Bank’s reporting requirements “should be integrated with the Borrower’s own monitoring and evaluation systems, as far as possible[,]” including through collaboration with local agencies and other stakeholders.386

Given its limited mandate of identifying indicators of fraud and corruption, the DIR cannot opine on the overall merits of the Bank’s supervision model. However, the DIR found that: (1) the OHSDP exhibited widespread indicators of fraud and bid rigging; (2) the PMC either did not know about these problems or chose not to report them to the Bank; and (3) as a result, the Bank identified the problems only at the project’s very end because it did not conduct earlier verifications of reported project outputs. These findings indicate a serious weakness in the Bank’s current supervision methodology, and the DIR’s review of the PIPs and PADs available for successor Indian state health projects indicate that this methodology has not been revised as a result of the Bank’s OHSDP experiences.387

C. Project Evaluation in the ICR

The Bank’s ICR rated the OHSDP’s project outcome as moderately satisfactory.388 This evaluation was based largely on statistical indicators—such as health and health-care usage statistics, budget allocations, passage of new policies, and hospital staffing rates—that sought to measure the project’s development impact.389 The March 2006 supervision mission Aide-Mémoire stated that the project’s rating did consider implementation issues as cutting against the positive statistical indicators and prompting a less-than-perfect project outcome rating.390 But the ICR’s assessment of civil works and EIF implementation was based on information provided by the PMC that is inconsistent with the DIR’s site visit observations.391

386 Ibid., paras. 10 and 12.
387 The DIR reviewed the Karnataka Health Systems and Reform Program PAD and PIP; the Maharashtra Health Systems Development Project PAD and PIP; the Rajasthan Health Systems Development Project Agreement and Project Proposal; the Tamil Urdu Health Systems Project draft PAD; the Uttar Pradesh Health Systems Development Project PAD; the Uttar Pradesh Health Systems Development Project II (Uttar Pradesh and Uttaranchal) draft PAD; and the West Bengal Health Sector Development Project PAD.
388 OHSDP ICR, p. 1.
389 Ibid., pp. 1 and 16–20.
390 March 2006 Aide-Mémoire, p. 4.
391 OHSDP ICR, pp. 41–42.
The ICR’s project rating thus reduced the weight given to civil works and EIF implementation in two ways: it relied more heavily on health statistics–based indicators, and it based its implementation assessments on apparently incorrect data. To its credit, in its March 2006 Aide-Mémoire the Region acknowledged that project implementation should have been given more weight as an indicator of project success: “Assessing the project as a whole, the indicators agreed to at project start had not envisaged the complex nature of each component and the need to directly measure actual operationalization of upgraded health facilities, which is critical in enhancing achievement of the project development objectives.”

Nevertheless, the Bank’s moderately satisfactory project rating stands in stark contrast to the problem-laden hospitals and non-compliant or dangerous equipment observed by the DIR.

---

392 March 2006 Aide-Mémoire, p. 4.
Photo Gallery

Photograph 1. Window Frames, SDH Athagarh, April 13, 2007

Photograph 2. Incomplete Renovation, AH Baramba, April 13, 2007
Photograph 3. New Facility Ceiling, SDH Kuchinda, April 3, 2007

Photograph 4. Undemolished Diarrhea Ward, CHC-I Soro, April 24, 2007
Photograph 5. Open Joint between Building Sections, DHH Nawarangpur, March 28, 2007

Photograph 6. Cracks and Mold from Water Damage, CHC II Garposh, April 3, 2007
Photograph 7. Exterior Water Damage, CHC-II Ullunda, April 3, 2007

Photograph 8. Detached Operating Theater Tiles, AH Kesinga, March 31, 2007
Photograph 9. Mold on New OB-GYN Building, Capital Hospital, April 12, 2007

Photograph 11. X-Ray Room Wiring, DHH Sundargarh, April 2, 2007

Photograph 12. Renovated Wiring Outside of Laboratory CHC-II Bijipur, April 5, 2007
Photograph 13. Electrical Wiring, CHC-II Charmal, April 2, 2007

Photograph 15. Sewage around New Hospital, SDH Jeypore, March 29, 2007


Photograph 18. Unused Hospital, DHH Berhampur, March 21, 2007

Photograph 20. Unused Maternity Wing, DHH Sundargarh, April 2, 2007
Photograph 21. Unused Operating Theater Suite through Locked Doors, DHH Baragarh, April 5, 2007

Photograph 22. Medical Waste in Well, CHC-II Manamunda, April 3, 2007

Photograph 25. Child at Waste-Littered Water Source, DHH
Jharsuguda, April 2, 2007

Photograph 26. Renovations to Operating Theater Abandoned,
DHH Angul, April 4, 2007
Photograph 27. Bathroom Walls, DHH Angul, April 4, 2007

Photograph 28. Water Damage in Operating Theater, DHH Angul, April 4, 2007
Photograph 29. Toilet Stall, DHH Angul, April 4, 2007

Photograph 30. Ceiling in Operating Theater Suite, CHC-I Balipatna, April 12, 2007
Photograph 31. Ceiling Concrete on Operating Theater Floor, CHC-I Balipatna, April 12, 2007

Photograph 32. X-Ray Room Roof with Holes, CHC-I Balipatna, April 12, 2007
Photograph 33. Exterior of Renovated Staff Quarters CHC-I
Balipatna, April 12, 2007

Photograph 34. Water Damage, DHH Bhadrak, April 24, 2007
Photograph 35. Bathroom, DHH Bhadrak, April 24, 2007

Photograph 36. Upper Floor Maternity Ward, DHH Bhadrak, April 24, 2007
Photograph 37. Disconnected Generator, DHH Bhadrak, April 24, 2007

Photograph 38. Unfinished Delivery Room, DHH Deogarh, April 3, 2007

Photograph 40. Water Damage, DHH Deogarh, April 3, 2007
Photograph 41. Bathroom, DHH Deogarh, April 3, 2007

Photograph 42. Cracked Wall, DHH Jagatsinghpur, April 12, 2007
Photograph 43. Unfinished Old Building Renovations, DHH
Jagatsinghpur, April 12, 2007

Photograph 44. Concrete in Waste Disposal Area, DHH
Jagatsinghpur, April 12, 2007
Photograph 45. Steel Door Frame, DHH Jagatsinghpur, April 12, 2007

Photograph 46. Elevator Shaft, DHH Jagatsinghpur, April 12, 2007
Photograph 47. Gap in New Building, DHH Koraput, March 28, 2007


Photograph 50. Gap in Operating Theater Flooring, DHH Koraput, March 28, 2007
Photograph 51. Water-Damaged Drop Ceiling, DHH Malkangiri, March 30, 2007

Photograph 52. Interior Corridor Wall, DHH Malkangiri, March 30, 2007
Photograph 53. Exterior Wall, DHH Malkangiri, March 30, 2007

Photograph 55. Crumbling Exterior Concrete, AH Narasinghpur, April 13, 2007

Photograph 56. Exterior Walls, AH Narasinghpur, April 13, 2007
Photograph 57. Rusting Steel Doors, AH Narasinghpur, April 13, 2007

Photograph 58. Patient Ward, AH Narasinghpur April 13, 2007
Photograph 59. Hallway, DHH Sonepur, April 3, 2007

Photograph 60. Operating Theater Door, DHH Sonepur, April 3, 2007
Photograph 61. Exposed Wiring, DHH Sonepur, April 3, 2007

Photograph 62. Electrical Box, DHH Sonepur, April 3, 2007
Photograph 63. Unfinished Renovations, DHH Sambalpur, April 2, 2007

Photograph 64. Building Joint, DHH Sambalpur, April 2, 2007
Photograph 65. New Unit Bathroom, DHH Sambalpur, April 2, 2007

Photograph 66. Electrical Wiring, DHH Sambalpur, April 2, 2007

Photograph 68. Uninstalled, Rusting Mortuary Cooler, AH Podagada, March 29, 2007
Photograph 69. Delivery Table, DHH Deogarh, April 3, 2007

Photograph 70. Fixed Operating Theater Lamp, CHC-I
Redhakhol, April 2, 2007
Photograph 71. Improvised Solution for Operating Theater Lamp, DHH Koraput, March 28, 2007

Photograph 72. Floor-Mounted Grouting Chair, CHC-I Redhakhol, April 2, 2007
Photograph 73. Hospital Bed, CHC-II Bijipur, April 5, 2007

Photograph 75. Hydraulic Operating Theater Table Leaking Oil, AH Bolagarh, April 17, 2007

Photograph 76. Rusting and Poorly Wired Mobile Operating Theater Lamp, CHC-II Pottangi, March 27, 2007
Photograph 77. Stainless Steel Stool, CHC-II Garposh, April 3, 2007

Photograph 78. Autoclave, DHH Koraput, March 28, 2007

Photograph 80. Phototherapy Unit with Exposed Ground Wire, CHC-I Mahanga, April 16, 2007
Photograph 81. 200W Lightbulb over Radiant Warmer, AH
Jajpur Rd, April 13, 2007

Photograph 82. Water Distillation Plant Without Nearby Power
Outlet, CHC-II Pottangi, March 27, 2007
Photograph 83. Generator in Storage, CHC-II Daburgaon, March 29, 2007

Photograph 84. Unused Equipment in Storage, DHH Berhampur, March 21, 2007

Photograph 86. Spare Desks Stored in Operating Theater, DHH Nawarangpur, March 28, 2007

Photograph 88. Extra Delta Medical Equipment in Storage, DHH Berhampur, March 21, 2007