

GEORGIA

**KOBULETI WATER PROJECT – PROJECT MANAGEMENT AND
IMPLEMENTATION SUPPORT - EXTENSION**

TERMS OF REFERENCE

1. BACKGROUND

The European Bank for Reconstruction and Development (the “EBRD” or the “Bank”) is working with the Government of Georgia through the Municipal Development Fund (“MDF”) to construct a wastewater treatment plant in Kobuleti. The Kobuleti Water Project (“Project”) involves a sovereign loan of EUR 1.5 million to the Ministry of Finance of Georgia, on-lent to the Kobuleti Water Company (“Company”). The Company is the only provider of water supply in Kobuleti City. MDF is acting as implementing agency on behalf of the Ministry of Finance.

The Bank and the MDF are now considering an extension of loan financing by further up to EUR 2.2 million to cover the sludge dewatering component, flood protection and other additional works.

The MDF already benefited from the Project Management and Implementation Support Services TC, provided by Hydro Ingenieure Umwelttechnik GmbH. Their assignment commenced in February 2011 and was completed in August 2012. However, a major part of the available budget had to be spent on the technical supervision of the Borjomi water treatment plant construction (as Project Management and Implementation Support Services was covering both Kobuleti and Borjomi Water Projects). Therefore, there is a need to mobilise additional funds for continuing the PIU support for the Kobuleti water project.

The tender for the wastewater treatment plant has been completed in May 2013 and the contract was signed with the successful tenderer. However, the contractor was unable to complete the works as his financial situation deteriorated and a termination notice was issued to the Contractor in October 2015. It is expected that the remaining scope would be re-tendered together with the additional works as a works contract. It has been further assessed that a sludge dewatering system shall be introduced at the WWTP, which will also be financed from the loan extension.

To support MDF in tendering, engineering supervision and ensure the high quality construction, an engineering supervision is crucial, as the Client is relatively inexperienced in modern wastewater treatment plants. In addition to supporting MDF, the consultant will play a role in helping to raise implementation capacity within the Company, which will operate the Project upon completion.

2. OBJECTIVES

The overall objective of this assignment is to facilitate the timely and effective implementation of the Project by rendering assistance to MDF in the implementation of the Project, including all aspects of procurement and disbursement under the Project in accordance with the EBRD Procurement Policies and Rules (the “Rules”) as well as in gaining additional experience in managing larger contracts, which are envisaged to be based on FIDIC Contract conditions. The Consultant shall also recommend where necessary strengthening measures to ensure that the MDF has at its disposal the requisite skills to carry

on the management of the Project at the end of this assignment and work to raise implementation capacity within the Company, who will operate the Project upon completion.

The overall objective of the Consultant is to facilitate the timely and effective implementation of the Project by:

- rendering assistance to the MDF in implementation of the Project, including all aspects of procurement and contract administration as well as to the Company as directed by the MDF;
- providing timely recommendations and reporting to the MDF in the contract administration process;
- performing the role of the Engineer (as defined in the FIDIC contract conditions) or equivalent including all aspects which in the Consultant's professional judgment may jeopardise the Projects' successful implementation and/or constitute violation of the contracts conditions; and
- if requested, the Consultant shall help the MDF to provide the Bank with data, advice and information in relation to contracts administration and supervision of works processes which shall be impartial and take due regard of the best industry practices, in particular FIDIC principles.

Through the Consultant, the MDF shall have access to best practice in the implementation of the Project and procurement of works, as well as advice on specific technical issues. The Consultant shall provide assistance in procurement of good, works and services completely in accordance with the procedures, specifications and documentation of the Bank and pursuant to all other agreements stipulated in the loan agreement signed between Georgia and EBRD.

3. SCOPE OF WORK

3.1. Introduction

The MDF has a staff of 121 and its team of 8 procurement specialists understands public sector procurement, based on their experience gained both through formal training and implementation of the World Bank, ADB, EIB funded projects. The MDF worked with the EBRD on the Poti, Kutaisi and Borjomi projects and has some experience in administering FIDIC based contracts.

The Consultant, to build capacity in this area, shall implement the following tasks:

- Assist the MDF in reviewing designs and ensuring design is appropriate for international tender;
- Assist the MDF submit the necessary documents to EBRD and other donors as required;
- Provide project management support to the MDF in coordinating, supervising, managing, monitoring and evaluating all aspects of the Projects, including project implementation, contract administration, procurement of services, goods and works, technical supervision and ESAP implementation;
- Assist the MDF to ensure that all reports, including technical and environmental and social reporting, required by the EBRD and other donors for implementation of the Projects and the loan are submitted on schedule;
- Enhance existing operations procedures for planning and implementation of the Project and different components with a view to achieving synergy between the works of the various parties and avoiding costly duplication of tasks;

- Attend meetings together with the MDF to support the Project, seek response to reports, and discuss project issues on a regular basis with the MDF and other key people; prepare and circulate minutes of the meetings, including follow-up actions required to ensure progress.
- Perform the role of the Engineer on all contracts under the Project (as defined in the FIDIC contract conditions for Design & Build and Construction-installation contracts or Plant design, supply and installation contract for the WB financed projects).

The details of the Project and contract are provided in Annex 1.

3.2. Consultant's Role as an Engineer (as defined in the FIDIC contract conditions)

The Consultant shall act as an Engineer appointed by the Employer to carry out the duties detailed in Annex 2.

3.3. Monitoring of the Project Implementation Plans

3.3.1. Establishing, reviewing and updating the Project Implementation Plans

The Consultant, in consultation with the MDF and the City shall establish, review and update the Project Implementation Plans (the "PIPs"), as needed, and acceptable to EBRD (or for EBRD financing) upon completion of design. The PIPs shall cover all aspects of project implementation, and shall include, *inter alia*:

- Project programmes - detailed project programmes (using appropriate presentation format: e.g. linked activity programmes, etc.) for completion of the Project - showing all activities and key events for design, approvals, construction, commissioning, completion etc., as well as for implementation of the ESAP. In the process of developing this plan, the Consultant will verify that all planning, construction and operation approvals and permits have been identified; and that the project programme fits with City planning.
- Project budgets - detailed cost budgets as well as cash flow forecast for the Project. This will be based on existing proposals of cost estimates. Project budgets will also consider the ESAP implementation.
- Project risk matrix - a risk matrix outlining the key challenges and risks associated with the Project and the measures proposed to deal with them.

3.3.2. Obtaining approvals for any changes to the plans in good time

Following approval of the PIPs, the Consultant shall closely monitor progress against the planned programmes; Where the Consultant and the MDF identify the need to change any aspect of the PIPs, a request for approval, accompanied by a clear outline of the need for such a change, shall be submitted to the board. This shall continue throughout the assignment. In addition, the Consultant shall assist the MDF in preparing any documentation to notify donors of material changes.

3.3.3. Any other activities

The Consultant shall ensure that all applicable environmental procedures required by the Bank and the donors are being adhered to and that the MDF is duly informed about the procedures.

3.4. Procurement Advisory Support

3.4.1. Monitoring of procurement

The Consultant shall assist the MDF with procurement and ensure that all procurement is carried out in accordance with the EBRD Procurement Policies and Rules (“PP&R”) and/or donor’s rules, where appropriate.

3.4.2. Advice on procurement strategy

The Consultant shall provide advice with respect to all aspects of the procurement strategy. This shall include, *inter alia*: forms of contract, interface management, optimum contracting timetable, supervision requirements, and, selection of dispute resolution panels.

It is expected that the works shall be retendered as a Works through a single-stage open tender, while the sludge dewatering component shall be procured as a Supply and Install or a Design and Build contract through a two-stage tender in accordance with EBRD PP&R. Any recommended changes to this strategy shall be submitted to Bank’s no objection.

3.4.3. Support during the preparation of procurement documentation

The Consultant shall provide support to the MDF in preparing the procurement documentation. To this end, the Consultant shall, *inter alia*:

- Review available technical specifications and documentation
- Prepare the basic design and technical specifications in the scope and details sufficient for including in the documents for an open tender. The design shall be based on findings and assumptions made during the Complementary Feasibility Analysis (to be shared with the Consultant).
- Ensure that any relevant actions in the ESAP are covered.
- Advise on the possibilities for alternatives, cost savings value engineering opportunities etc. and the treatment of these in the tender documents.
- Draft tender documents.

3.4.4. Support during the procurement process

The Consultant shall provide support to the MDF throughout the procurement process. To this end, the Consultant shall, *inter alia*:

- Assist with drafting and ensure that all procurement notices are placed in a timely manner in accordance with the Rules.
- Ensure that all approvals and no-objections are applied for in a timely manner.
- Assist with the administration of the tender process, ensure that appropriate records are kept, documentation is properly stored, recorded and managed, and confidentiality is maintained.
- Assist with preparing draft responses to Tender enquiries, arrange for approval and issue and record the same.

3.4.5. Support during the evaluation process

The Consultant shall take the advisory role in organising and managing the evaluation process. To this end, the Consultant shall, *inter alia*:

- Give advice on the composition of the Evaluation Committee (the “Committee”) and to the Committee as required.
- Draft detailed Technical Evaluation Report for the consideration of the Committee. Assist with compiling the Evaluation Report in the required format, including all

technical and financial analyses, records of consultation with external parties by the Committee and clarifications requested and receive.

- Participate at meetings of the Evaluation Committee.
- Ensure that all queries and complaints are promptly attended to as appropriate and copy such inquiries as appropriate to the Bank.

3.4.6. Support during contract finalisation

The Consultant will provide support to the MDF during contract finalisation. To this end, the Consultant will, inter alia:

- Prepare a brief for the MDF indicating all the items to be resolved in the clarifications pre-contract, if any.
- Attend pre-contract discussions, if any, and document the discussions, updating the contract documents as necessary and seeking all necessary approvals.
- Ensure that all queries and complaints are promptly attended to as appropriate and copy such inquiries as appropriate to the Bank.

3.5. Contract administration support

3.5.1. Assisting the Employer under the construction Contracts

In addition to the duties described and/or referred to in clause 3.2 above, the Consultant shall assist the MDF with carrying out the day to day activities of the engineer or the employer's representative under the construction contracts as well as assistance to the Company.

3.5.2. Technical advice to the MDF

The Consultant shall provide ad-hoc technical and contractual advice to the MDF and the Company with respect to all aspects of project implementation.

3.5.3. Assistance with disbursement

The Consultant shall assist the MDF with disbursement under the contracts.

3.6. Support in ensuring compliance with environmental agreements

Environmental Matters

The Consultant shall work closely with the MDF and the Company to ensure that all applicable environmental and social requirements by the Bank and the donors are being adhered to and that the MDF is duly informed about relevant procedures. This shall include assistance in implementing Environmental and Social Action Plans for the Projects, and assisting the Company in environmental and social reporting.

4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

4.1. Facilities for the Consultant and access to information

The Consultant shall report to MDF and liaise closely with EBRD on all matter concerning the assignment.

The Consultants shall be located in Tbilisi but will be required to travel to Kobuleti when necessary.

The Consultant will be provided with free of charge furnished and serviced office accommodation suitable for this assignment. The MDF will also provide access to all available and relevant project information, reports and documents, including maps, studies, models, legal documents, etc. at no cost to the Consultant. All documentation will be provided in the original version (i.e. not necessarily in English). All documentation related to the works is and will remain the property of the MDF after completion of the assignment. The Consultant shall not publish, use or dispose of this documentation without written consent of the MDF and EBRD.

The Consultant will be responsible for all local and international transport, living accommodation and expenses for its staff, together with communications materials, printing, report production and translation. The Consultant will be responsible for all salaries, fees, allowances, insurance, leave pay and taxes for the staff involved in the assignment.

In light of the need to travel to the Project site to supervise work, it is recommended that the Consultant purchase a car for this assignment.

4.2. Timetable

The assignment is expected to have a total duration of 24 months.

4.3. Deliverables

The Consultant shall submit to the MDF (and to the Company as directed by the MDF) with copies to EBRD the following reports:

Deliverable	Reports Submitted (from assignment commencement)	Comments supplied	Final Submitted
Inception Report including implementation schedule and procurement strategy	2 weeks	Two weeks thereafter	one month after mobilisation
Quarterly Report	Last working day of each quarter	One week thereafter	Not required
Final Report	Last month of the assignment	One week thereafter	After completion
Ah hoc reports	Whenever required for a specific subject	Two weeks after draft submission	Two weeks after comments

Not later than one month from the assignment commencement, the Consultant shall prepare an **Inception Report**. This report shall include information on the status of the Projects' preparation and implementation, the Consultant's assessment of effectiveness of the loan agreement, and a revised overall Procurement Plan and Contracting Strategy. The expected Project Implementation Schedule, corrected in accordance with the realistic status, shall be attached to the report, as well as the Consultant's work schedule for the next quarter.

The Consultant shall submit the **Quarterly Progress Reports**. The format of these reports shall be agreed with the MDF and EBRD and shall include, but not be limited to, the following:

- progress to date versus progress anticipated in the PIPs, for each activity;
- actual or expected deviations from the PIPs, and the implications for meeting target completion dates;
- recommendations and/or actions proposed/taken as are within the Consultant's delegated authority to mitigate and/or rectify such deviations;
- an update of the risk matrix, highlighting any developments likely to affect Projects viability;
- an update of the Projects decision matrix, highlighting any developments or issues related to key decisions; and
- key personnel changes.

The Consultant shall submit a draft of the **Final Report** one month prior to the completion of the assignment. The final report shall (i) provide an overview of the overall assignment; (ii) summarise the results of all tasks outlined in Section 3, Scope of Work, providing a comparison between targets set and actual achievements; and (iii) offer a commentary on lessons learned. Upon receipt of the Company's comments and suggestions, the Consultant shall submit a final version to the MDF.

The Consultant shall prepare hard copies of all reports and deliverables in Georgian and four hard copies in English, which shall be delivered as follows:

MDF: 4 copies in Georgian; 4 copies in English in hard copy
EBRD: no hard copies required, only electronic submission

In addition to the hard copies, all reports shall be submitted electronically in Microsoft Word and Excel or PDF format to all parties.

5. CONSULTANT PROFILE

Corporate services are required. The Consultant will be a firm or a group of firms with previous project experience in:

- 1) water and wastewater sector in comparable climatic and geological conditions, including wastewater treatment technologies;
- 2) support for implementation of projects financed by international financial institutions ("IFIs") or equivalent, including engineering support, procurement and contract supervision.

The Consultant's team is expected to include the following **key experts**:

- (i) **Project manager** (Project planning/ Project management)
 - preferably 5 years or more of experience in the water and wastewater sector, working in similar positions
 - construction experience gained in countries with climatic conditions similar to the project sites;
 - knowledge and experience of procedure and rules of procurement of IFIs;
- (ii) **Engineer** (Quality assurance)
 - preferably 5 years or more of experience in the water and wastewater sector, working in similar positions

- construction experience gained in countries with climatic conditions similar to the project sites;
- knowledge and experience of procedure and rules of procurement of IFIs;
- knowledge and experience in applying FIDIC contract conditions;

(iii) **Environmental and health and safety expert** (Environmental impact assessment/ Construction safety)

- preferably 5 years or more of experience in the water and wastewater sector, working in similar positions;
- knowledge and experience of procedure and EBRD E&S Policy;

(iv) **Process engineer** (Design of Wastewater Treatment Plant including Sludge Dewatering System)

- preferably 5 years or more of experience in the water and wastewater sector, working in similar positions;
- construction experience gained in countries with climatic conditions similar to the project sites;
- knowledge and experience of procedure and rules of procurement of IFIs;
- knowledge and experience in applying FIDIC contract conditions;

(v) **Engineer** (Contract supervision, FIDIC)

- preferably 5 years or more of experience in the water and wastewater sector, working in similar positions;
- construction experience gained in countries with climatic conditions similar to the project sites;
- knowledge and experience of procedure and rules of procurement of IFIs;
- knowledge and experience in applying FIDIC contract conditions;
- knowledge of requirements of Georgian legislation concerning construction.

Annexes

Annex 1 – Details of Projects and ongoing and planned contracts

Annex 2 – Details of the Consultant's duties and authority as an Engineer

ANNEX 1**Details of Projects and ongoing and planned contracts**

Rehabilitation of water supply and wastewater (sewage) systems of Kobuleti was executed during 2009-2010 under the Regional Development Project financed by MCC/MCG. Works included rehabilitation of water supply wellfield, reservoir and mains, water and sewage networks, rehabilitation of main sewage collectors and pumping stations.

Construction of wastewater treatment plant (WWTP) which is scheduled to be completed by the end of 2016 is the final stage of wastewater system rehabilitation. WWTP will be located in Northern part of Town at the confluence of Ochkhamuri and Choloki rivers.

Project envisages construction of wastewater treatment plant with a hydraulic and biological peak load for 68.500 inhabitants. Overall design, process and technological (electrical and mechanical) part of WWTP are prepared by OWS - “Orange Water Solutions” (Netherlands). WWTP design envisages full biological treatment of wastewater based on activate sludge process. Design capacity of WWTP for non-peak season is 5,500 m³/day and 20,550 m³/day for peak load (touristic season). WWTP comprise of:

- 1) trash removal unit
- 2) grit removal unit
- 3) selector unit
- 4) odour filter unit
- 5) activated sludge tank/basin
- 6) secondary clarifiers
- 7) waste sludge pumps
- 8) sludge thickener
- 9) thickened sludge pump
- 10) sludge storage
- 11) scum drain pit
- 12) sewage pit
- 13) operational building
- 14) process water
- 15) electrical transformer
- 16) effluent pumping station

In addition, design, supply and installation of sludge dewatering equipment are planned during the later phase of Project implementation.

	Project / Contract	Contract Status	Implementation progress	Donor
Kobuleti Water Project – City of Kobuleti				
1	Rehabilitation of Kobuleti water supply and sewage systems, Construction Zone 1	Completed	100%	MCG
2	Rehabilitation of Kobuleti water supply and sewage systems, Construction Zone 2	Completed	100%	MCG
3	Rehabilitation of Kobuleti water supply system (wellfield, reservoir and mains)	Completed	100%	MCG
4	Construction of waste water treatment plant (WWTP)	Planned	Tender completed	EBRD

For planned project, the Consultant's role as an Engineer will include the review and approval of the detailed design to be prepared by the WWTP Contractors and services related to construction supervision.

Additional / Supplementary investments (2015)

The investments for some components were postponed due to shortage of budget when signing the contract in July 2013 (but delayed start in August 2014) and due to urgent measures for flood protection of the WWTP site in autumn 2014. Without these components the plant will be unable to treat wastewater, therefore the available finance needs to be increased for the completion of the plant. A budget has been prepared for this.

New Investments

The new investments are proposed for a sludge dewatering system that shall treat the thickened surplus sludge via the conditioning with polymer, mechanical sludge dewatering to 22 – 25 % dry solids and transportation of dewatered sludge to landfill. The proposed options for the dewatering technology would be belt filter press or decanter centrifuge. It would concern a complete system with a sludge treatment building and with all required equipment and ancillary facilities. Investment and O&M cost have been estimated based on the experience in similar sludge treatment facilities.

It is recommended that the sludge dewatering system is tendered via a Design and Build Contract under FIDIC Yellow Book Conditions, or a Supply and Installation contract using the EBRD standard tender document.

ANNEX 2**Details of the Consultant's duties and authority as an Engineer**

The Consultant will perform the duties and authority of the Engineer as specified in or necessarily implied from the Contract, as well as administer the Contract, dealing with situations in accordance with the Consultant will perform his duties or act:

- Proactively, where the initiative lies with the Engineer in administering the Contract;
- Reactively, in response to the Contractors' or the Employer's requests; and
- Passively, in observing the requirements of the Contract.

Wherever appropriate and not in conflict with the Contract, the Consultant will exercise every reasonable care to protect the interests of the Employer.

The Supervision functions include but are not limited to the following:

- Advice to MDF as necessary on all contract aspects;
- Review and approval of the Contractor's works programs;
- Review and approval of detailed engineering designs, technical specifications and bills of quantities for all works including infrastructure lines;
- Supervision over construction including review and approval of documentation, works organization plans and working drawings as well as over taking over the completed works and remedying defects;
- Review of equipment procurement orders, analyses of equipment procurement;
- As necessary, assessment of Project costs implications caused by delays;
- Supervision of equipment installation;
- Supervision of test upon completion and commissioning;
- Review of operation manuals; and
- Attending all meetings with Contractors.

Statutory Requirements

The Consultant will have the following obligations:

- Help MDF to draw up and maintain a schedule of all necessary statutory licences, permits and approvals necessary for the design, implementation and operation of the Project Check that such applications are made on time and assist in negotiations with other parties, as necessary from time to time;
- Coordinate with and assist MDF to ensure that all permits required by the Employer in accordance with the Georgian legislation are obtained on time.

Construction Risk Assessment

The Consultant will have the following obligations in relation to all Project contracts:

- Identification of hazards for the design and construction stages. This must comprise procedural risks, environmental risks, technical and quality risks, risk of cost overrun, risk of delays, risk to third parties, etc.;
- Assess the likelihood of these risks and the potential consequences;
- Identify possible mitigation measures; and

- Proactively and continuously seek to manage and reduce/eliminate hazards/risks.

As-Built Drawings and Documentation

For all Project contracts the Consultant will have the following obligations:

- Upon completion, receive from the Contractors for approval copies of all As-Built Drawings (in the English and Georgian languages) of the Permanent Works as completed, and such other technical and design information and completion records relating to the said permanent works as specified in the Contract and review them as the Project Engineer.

Environment and Health & Safety

For all contracts, the Consultant will have the following obligations:

- Check that the Contractors takes all steps required by the Georgian legislation and the Contracts to ensure that proper pollution control and other environmental protection measures are taken and notify MDF if the Contractors are not taking the said measures and advise MDF of what further measures should be taken to comply with the said Contracts and the Georgian legislation.

Monitoring of Program Implementation Progress

For all contracts, the Consultant will have the following obligations:

- Advise MDF on compliance by the Contractors with respect to sub-contracting, as specified in the Contracts.
- Upon receipt of the Contractor' Programs, and within the time stipulated in the FIDIC Conditions of Contract, notify the contractors, with a copy to MDF whether the Programme complies with the Contract, and if not, in what respect does it not comply.
- Request the contractors to provide expected monthly cash flow statements.
- Verify that the progress of the Works is in compliance with the Program Implementation Plan/Programme approved under the Contracts. Notify MDF as far as possible in advance of any possible non-compliance with the Programme.
- Report on the Contractors' control of the progress of the Works to ensure completion of the Works within the time established in accordance with the Contracts.
- If for any cause other than those listed in the Contracts, the rate of progress of the Works is at any time, in the Consultant's opinion, too slow to ensure the completion of the Works by the Completion Date, instruct the Contractors in accordance with the FIDIC Conditions of Contract in writing with a copy to the MDF.
- Authorise any reasonable request by the Contractors to work outside agreed time windows (e.g. at night or on locally recognised holidays) to expedite progress so as to comply with the Completion Date for the Works.
- Receive from the Contractors due copies of formal quarterly and monthly Progress Reports, in accordance with the FIDIC Conditions of Contract, checking the same to ensure that they cover all relevant aspects of the Works and highlights actual or potential departures from the Programme, cash flow forecast and stating the proposed or necessary measures to be taken by the Contractors to overcome such departures; commenting on and supplementing as necessary such Progress Reports before forwarding them to the MDF, and advising them of any necessary measures to be taken to achieve completion of each Section within the applicable Time for Completion.

- Convene formal monthly meetings with Project participants and other relevant parties. These meetings must have a formal agenda and minutes.
- Check the provision of all necessary insurance, performance securities and warranties and other relevant contract documentation.

Quality Control

- Develop a Quality Management Plan (QMP) for all aspects of the Project;
- Require the contractors (and design consultants) to develop and adhere to a Project specific Quality Assurance Manual;
- Receive from the Contractors (and design consultants) and comment on the full detailed version of their Quality Assurance Manual in English and Georgian; if necessary, request the Contractors to amend the Manual;
- Audit the Contractors' Quality Assurance systems and their application;
- Carry out necessary oversight to ensure that the Contractors maintain an effective and sufficient quality assurance procedure for the Works and monitor its operation;
- Ensure that the contractors retain independent inspection companies acceptable to MDF, to undertake their own QC;
- Notify MDF if there is any failure of tests or inspection and if such failure is anticipated to cause delay to any Completion Date or other material adverse consequence; advice on further tests required and arrange that the Contractors carry out necessary rectification;
- Carry out general inspection of the work being executed by the Contractors to provide assurance as to the quality and standards of the materials and workmanship, and compliance with the specifications and drawings as included in the contracts, the Approved Design, the Detailed Drawings, the Method Statements, the Quality Assurance Manual and any agreed amendment thereto;
- Verify that independent testing of the materials or plant to be supplied under the contracts as is required by the contracts has been or is to be carried out in accordance with such requirements at the expense of the Contractors.
- Agree with the Contractors on procedures and timing for inspecting, witnessing or testing any materials or plant as provided in the Quality Assurance Manual or the Contracts. Where notice of testing is required, give the Contractors not less than 72 hours notice of intention to carry out an inspection or attend tests.
- Agree practical procedures with the Contractors for giving notice for any examination by the Engineer, which may be required before the Contractors can cover up or put out of view any part of the Works. In accordance with such procedures, and the approved Quality Assurance Manual, examine where appropriate and check any part of the Works which is about to be covered or put out of view; notify and advise the MDF if any material defects are discovered and monitor the remedying of same.
- Require from the Contractors to make available for review copies of all test results within a reasonable time of the test being carried out.
- Through monitoring of the contractors activities, or through on-site inspection, determine if any materials or equipment are or are likely to be defective or otherwise not in accordance with the Contracts, and reject such materials or plant.
- Take into consideration any reasonable requirement by MDF of inspection, testing of plant, goods or materials found to be defective pursuant to the contracts or where he has reasonable ground for suspecting the existence of a defect or defects. Carry out any such inspection and arrange such testing on behalf of the MDF in accordance with the contracts.
- Assist the MDF with examining and measuring any part of the Works which is about to be covered up or put out of view, and examining foundations before any part of the Works is placed thereon. Give reasonable prior notice to the MDF whenever such part of the works

- or foundations is ready for such examination.
- Carry out, when requested by MDF, such other inspections, supervision of testing on-site or procure the carrying out by the Contractors of such tests and supervise the same and carry out such other acceptance procedures or arrangements with the Relevant Authorities.
- Supervise factory inspections, all installation work at the sites and commissioning/testing of Project components, if required.

Site Management Meetings

- Attend site meetings and endeavour to ensure that at all times outstanding problems are settled in order to avoid any delay or extra expenditure (having regarded, however, to the terms of the Contracts and the limitations on the authority of the Consultant referred to under these Terms of Reference).
- Keep track on all interfaces, attend interface co-ordination meetings and assure that all interfaces are properly managed and that interface problems are addressed and solved.
- Keep full and proper records of all meetings and discussions attended or conducted by the Consultant and make the same available for inspection by MDF forthwith on request.
- On request of the MDF, attend meetings to resolve differences of opinion on general or technical matters.
- Ensure that MDF receives timely notice of and is permitted to attend all site meetings and other meetings with the Contractors.
- Notify the Contractors if the Consultant objects to any person who has conducted himself as incompetent or negligent; notify and advise MDF if this is the case and agree on any action to be taken.
- Advise MDF on the general organisation of the Contractors' resources at the Site, including management and programming systems, manpower, plant and equipment.

Payments and Accounts

The Consultant will perform the duties of the Engineer in relation to payment of the Contractors' Works in accordance with the Contracts:

- Receive from the Contractors on a monthly, or otherwise agreed basis payment statements pursuant to the Contracts.
- Contractors' payment statements should be confirmed by Municipality and/or Water Company;
- Check in accordance with the relevant provisions of the Contracts the Contractors' statements and resolve with the Contractors, where possible, any mistakes and queries which may arise in conjunction therewith; advise MDF of any adjustments considered necessary.
- Ascertain the amount to be certified in respect of the Contractors' statements pursuant to the Contracts. Within the times stipulated in the FIDIC Conditions of Contract, issue payment certificates addressed to the Contractor specifying the aggregate amount payable by the Employer to the Contractor.
- Certify any additional amounts due to a Contractor in respect of valid claims notified in accordance with the procedure set out in a Contract.
- Consider and verify any invoices submitted by the Contractors pursuant to the Contracts and certify any additional sums which the Consultant is empowered to certify as due, provided always that the Contractors has supplied sufficient particulars to enable the Consultant to determine the amount due.
- Fully comply with the procedure for disputed certificates set out in the Contracts. In particular, complete within two weeks any adjudication under the Contracts, which may

be required. Forthwith carry out any correction or modification of any certificate or other action authorised by the Contracts whenever the Consultant considers it appropriate to do so.

- As required by the FIDIC Conditions of Contract, no later than fifty six (56) days after the date of issue of the final statement, receive from the Contractors draft Final Payment Certificates pursuant to the Contracts. Within the times stipulated in the FIDIC Conditions of Contract after receipt of this draft Final Payment Certificate, work with the contractors to agree upon a Final Statement.
- Analyse, report on and forecast cash flows under the Project.
- Support Municipality and Water Company in taking over completed works on the WWTP from the Main Contractors.

Delays and Claims

- Check that the Contractors continue to give the details and notices that are required under the Contracts relating to any delay and forward such details and notices to the MDF
- Notify the MDF immediately if a Contractor fails to complete any works within the applicable Completion Date or appears likely so to fail.
- Advise the MDF on any difficulties that may arise generally in connection with the execution of the Works.
- Receive notice of the intention of a Contractor to claim any additional payment within the times stipulated in the FIDIC Conditions of Contract and adopt the stipulated process for claim resolution and notify the MDF thereof.
- Upon the request of the Contractor, discuss the delay, the reasons therefore, determine and notify the Contractor of any extension of time and any amendments to the contract, Programme or cash flow forecast. Where the delay has been caused by any of the causes referred to in the Contracts or where an extension of time has been granted, consult with the Contractor on behalf of the MDF, and send to the MDF for its review, such amendments to the contract, Programme or cash flow forecast which the Contractor considers necessary in consequence of any such delay or extension of time.
- Work with the MDF and the Contractor to set up the Dispute Adjudication Board, as required under the FIDIC Conditions of Contract, and follow up all requisite processes in addressing the Contractors or Employers claims.
- If necessary prepare a case for the application of Delay damages or a claim against the Performance Guarantee where a Contractor has failed to perform.

In addition to the above, in the event of receipt of a notice of claim from a Contractor, immediately thereafter, the consultant will notify and copy the notice to MDF.

Promptly after receipt of any contractor's claim, the Consultant will provide the MDF with an assessment of the Consultant's preliminary conclusions with regard to the potential outcome of the claim. The Consultant will require the Contractor to copy to MDF all accounts sent to the Consultant with regard to the Contractor's claim.

Prior to certification of any payment to a Contractor in relation to a Contractor's claim, the Consultant will have consulted with the MDF on the grounds on which the Consultant intends to certify the payment. The Consultant will provide MDF with any particulars to enable MDF to establish its position with regard to the Consultant's certificate.

Variations

The Consultant shall note that MDF is under obligation to seek the Lenders' and Donors'

concurrence before agreeing to or implementing any material modification to the terms and conditions of any Contract.

The Consultant shall assist MDF to comply with the procedures agreed with the Lenders and Donors.

In case of a variation, the Consultant shall follow the procedures and conditions stipulated within the FIDIC Conditions:

- However, in the event that the MDF orders changes to the Approved Design, and if the compliance with such order has, in the opinion of the Engineer, materially delayed or is potentially likely to delay the Completion Date for the Works, determine the extension of time and the additional payment to which the Contractor will be entitled in accordance with the terms of the Contract.

Suspension

If in the Consultant's opinion, a suspension is required, the Consultant will first consult with and seek the approval of MDF. After receiving their approval of a suspension, the Consultant will follow the procedures and conditions established in the FIDIC Conditions.

Default and Disputes

The Consultant shall:

- Notify the MDF immediately if a Contractor is failing to comply with its obligations under a Contract. Discuss with the MDF possible remedies, and advise on the rights and obligations of the parties under the Contract.
- As soon as may be practicable after any entry and termination by MDF in accordance with a Contract, adopt the procedures and conditions stipulated in the FIDIC Conditions.
- If any urgent remedial work is necessary, act in accordance with the Contract, and otherwise advise the MDF on carrying out the same by the Contractor or, if impossible to do so, discuss such failure with the MDF.
- If any dispute or difference is referred to arbitration, assist MDF generally in respect of such arbitration provided always that the Consultant will not be required to act improperly or contrary to his obligations as the Engineer under the Contract.
- In the event of termination, provide advice and assistance in connection with the departure of a Contractor from the site and the assignment of the benefit of any agreement for the supply of goods, materials, services and/or execution of any works.

Advise MDF of their rights upon the occurrence of any Force majeure event.

Reporting for Construction Supervision Phase

Monthly Progress Reports

The Consultant shall submit monthly progress reports by the 7th of the month following the reporting month, reflecting the progress of the work during the reporting month. These reports should normally include, but not limited to:

- (i) a work program with a bar chart showing scheduled against actual financial/physical progress by major work item, illustrated by bars and percentage of accomplishment (total and by major work item); the work program and the bar chart (showing the critical path) shall be suitably updated in each progress report;

- (ii) financial data, updated as appropriate, giving time, cost and financial forecast, a schedule of certified payments, update of quantities and cost estimates for construction and supervision; and expenditure related to cash flow forecast and budget;
- (iii) summary of physical implementation progress, testing and quality control related to program and time, and with photographic report of the project highlighting difficulties, issues and work progress for all sections,
- (iv) the work performed, variations issued, payments certified, the mechanical equipment, materials and manpower (skilled/unskilled by foreign/local categories in person-months) utilized by the contractor during the reporting month, together with an outline of the work to be performed during the next reporting period; the Engineer's personnel arrivals and departures;
- (v) statement of causes of possible delays and remedial measures taken or recommended;
- (vi) adjustments and modifications of the drawings with rationale specifying causes, responsibility, and impacts on cost and schedule;
- (vii) claims or disputes, and other stakeholder issues; and
- (viii) progress of the environmental management plan (quarterly).

Project Completion Report (PCR)

The Consultant will draft a PCR immediately prior to physical completion of construction works in a manner satisfactory to MDF and Bank, including the major Project events, performance of the contractors, operation of the Project, actual Project cost (foreign and local costs separately) by implementation year, and labour employed by skilled/unskilled and foreign/local categories in man-years;

- (i) the major Project events, the relative successes (problems) in the implementation of each of the sections, this section of the PCR shall also contain an assessment of the impact of road improvement on the economy and social aspects for the whole Project area;
- (ii) “as-built” drawings (to be submitted to MDF). These “as-built” drawings will be furnished by the Contractor as defined in construction contract and certified by the Consultant.
- (iii) Results of Plant commissioning and functional tests.