

REPUBLIC OF LEBANON

Council for Development and Reconstruction

Completion of Construction and Operation of Ghadir Marine Landfill

Tender Documents

Volume 1

Bid Conditions and Procedures, and Conditions of Contract

April 2023



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GENERAL TABLE OF CONTENT

BID CONDITIONS AND PROCEDURES

- INSTRUCTIONS TO BIDDERS

- A - GENERAL
- B - BID DOCUMENTS
- C - PREPARATION OF BIDS
- D - SUBMISSION OF BIDS
- E - BID OPENING AND EVALUATION
- F - AWARD OF CONTRACT

- BIDDING DATA SHEET

- FORMS AND SCHEDULES

- FORM OF CONTRACTUAL COMMITMENT
- FORM OF BID
- FORM OF BID SECURITY (BANK GUARANTEE)
- FORM OF BANK CERTIFICATE FOR FINANCIAL CAPABILITIES
- APPENDIX TO BID
- FORM OF JOINT VENTURE AGREEMENT
- SCHEDULE 1 - MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT
- SCHEDULE 2 - KEY PERSONNEL
- SCHEDULE 3 - SUBCONTRACTORS
- SCHEDULE 4 - MANUFACTURERS
- QUALIFICATION FORM 1 - CANDIDATE'S SUMMARY

CONDITIONS OF CONTRACT

A. Construction Works

- **PART I - GENERAL CONDITIONS OF CONTRACT**
- **PART II - CONDITIONS OF PARTICULAR APPLICATION (COPA)**

B. Landfill Operation

- **PART I - CONDITIONS OF CONTRACT (with Appendices A, B, C & D)**
- **PART II - SUPPLEMENTARY CONDITIONS OF CONTRACT (with Appendices A & B)**

APPENDICES

- **Appendix 1: Safety, Health and Environment Regulation**
- **Appendix 2: VAT Mandate**
- **Appendix 3: Power of Attorney for Firm's Representative**

CONTRACTUAL FORMS

- **FORM OF AGREEMENT**
- **FORMS OF BANK GUARANTEES FOR GOOD PERFORMANCE**
- **FORM BANK GUARANTEE FOR ADVANCE PAYMENT**

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENT

A.	GENERAL	1
1	SCOPE OF BID.....	1
2	SOURCE OF FUNDS.....	2
3	ELIGIBLE BIDDERS	2
4	ELIGIBLE MATERIALS, EQUIPMENT AND PLANT	3
5	QUALIFICATION OF THE BIDDER	3
6	ONE BID PER BIDDER.....	4
7	COST OF BIDDING	5
8	SITE VISIT	5
B.	BID DOCUMENTS.....	5
9	CONTENT OF BID DOCUMENTS	5
10	CLARIFICATION OF BID DOCUMENTS	5
11	AMENDMENT OF BID DOCUMENTS.....	6
C.	PREPARATION OF BIDS.....	6
12	LANGUAGE OF BID	6
13	COMPLETE BID	6
14	BID PRICES	6
15	CURRENCIES OF BID AND PAYMENT	7
16	BID VALIDITY	7
17	BID SECURITY	7
18	ALTERNATIVE PROPOSALS BY BIDDERS.....	8
19	PRE-BID MEETING	8
20	FORMAT AND SIGNING OF BID	9
D.	SUBMISSION OF BIDS	9
21	SEALING AND MARKING OF BIDS.....	9
22	DEADLINE FOR SUBMISSION OF BIDS	10
23	LATE BIDS.....	10
24	MODIFICATION AND WITHDRAWAL OF BIDS	11
E.	BID OPENING AND EVALUATION.....	11
25	BID OPENING	11
26	PROCESS TO BE CONFIDENTIAL.....	11
27	CLARIFICATION OF BIDS	11
28	EXAMINATION OF BIDS & DETERMINATION OF RESPONSIVENESS.....	12
29	CORRECTION OF ERRORS	12
30	CONVERSION TO SINGLE CURRENCY	12
31	EVALUATION AND COMPARISON OF BIDS	13
F.	AWARD OF CONTRACT	13
32	PREFERENCE FOR DOMESTIC BIDDERS	13
33	AWARD	13
34	EMPLOYER'S RIGHT TO ACCEPT OR TO REJECT ANY OR ALL BIDS.....	13
35	NOTIFICATION OF AWARD	13
36	SIGNING OF AGREEMENT.....	13
37	PERFORMANCE SECURITY	14

INSTRUCTIONS TO BIDDERS

A. GENERAL

1 SCOPE OF BID

The Costa Brava or Ghadir Landfill has been ongoing for some time now.

A brief recount follows.

Based on the Council of Minister's Decision 1, dated 17/03/2016, which is an amendment of CoM Decision 1 (dated 12/03/2014) on Municipal Solid Waste, and which stipulates among other provisions, the establishment of a temporary sanitary landfill in the area of Al-Ghadir River outlet, Rafik El-Khoury & Partners were assigned by the CDR to prepare the Design, Tender Documents & EIA for the Construction and Operation of the Ghadir Sanitary Landfill in the Costa Brava – Ghadir Coastal area. The Ghadir Sanitary Landfill was designed to serve a lifetime of 4 years and to have a landfilling capacity of approximately 1,000, 000 tons of Municipal Solid Waste (MSW). The Ghadir Sanitary Landfill received on a daily basis over 1,000 tons of MSW in bales or in bulk from the Existing Treatment Centers (Quarantina and Amrousieh Sorting Facilities). The Ghadir Sanitary Landfill was made up of three (3) separated sanitary cells and was be secured by an armored breakwater marine structure. Main site preparation and construction works involved in the establishment of the Ghadir Landfill include:

Seabed cleaning, dredging and backfilling works, Construction of armored marine breakwater structure and cell separation mounds and other protection mounds of the land side of the landfill, Reclamation and construction of 3 sanitary cells (Cells # 1, # 2, and # 3), Construction of leachate collection and treatment system and landfill gas collection and flaring system, Construction of Ancillary Buildings (prefabricated office buildings, technical zone and workshop steel hangars, fully electronic weighbridge), Construction of Landfill site fence walls and gates and construction of paved internal roads.

On the basis of Council of Minister's Decision No. (46) dated 26/10/2017, CDR requested the Consultant Rafik El-Khoury & Partners to prepare various possible alternative to extend the Costa Brava Landfill taking into consideration providing an area for building a sewerage treatment plant.

For the extension option 3 was adopted. It is made up of two parts that are separated by a narrow sea path for the Ghadir River outlet. The Southern part which is a sea ward extension of the existing Costa Brava consisting of Cell 1 (area: 78,480m²). The Northern part has 2 cells, i.e. cell 2 A (area: 82,222m²) and cell 2 B (area: 84,087m²). It also comprises the reserved area for Ghadir WWTP (area: 130,665m²). This extension will serve a lifetime of 4 years and will have a landfilling capacity of approximately 1,500,000 tons of Municipal solid waste (MSW). The Ghadir Sanitary Landfill will receive on a daily basis over 1000 tons of MSW in bales or in bulk from the existing treatment centers.

Main Site Preparation and Construction work involved: Seabed cleaning, dredging and landfilling works, Construction of armored Marine breakwater structure and cell separation mounds and other protection mounds of the landside of the landfill, Construction of an access

ramp to connect cell 2A and 2B to the highway entrance, Construction of ancillary building (prefabricated office building, technical zone and workshop, Construction of Landfill site fence and gate and paved internal roads.

CDR intends to launch a new tender for the completion of the present Contract after its closure with the present Contractor.

The works covered by the new Contract are as follows:

- A. Construction:
 - 1. Topographic survey of the area of the project
 - 2. Operations for Cell #2 and Backfill in Cell #1.
 - 3. A leachate collection System of pipes, collection pits, pumping units, treatment units are to be designed.
 - 4. A Gas collection system is to be designed and installed to ensure optimum efficiency in collection and extraction for flaring purposes or power generation, as deemed feasible.
 - 5. Backfill in Ghadir WWTP reserved area up to +2m level
- B. Operation:
 - 1. Cells are to be backfilled with Solid waste from the treatment plant. Intermediate daily soil covers shall be placed in between layers of Solid waste as per normal practice.
 - 2. When cells have been filled to level 13m they shall be topped by a final cap consisting of (from bottom to top) a soil layer, a clay layer, a geomembrane, a filter gravel layer with geotextile, an agricultural soil and plantation.

The **COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION**, hereinafter called "the Employer", wishes to receive bids for the construction of Works, as described in the Bidding Data Sheet, hereinafter referred to as "the Works".

1.1 The successful bidder will be expected to complete the Works within the time stated in the Appendix to Form of Bid from the date of commencement of the works.

1.2 Throughout these bidding documents, the terms "bid" and "tender" and their derivatives ("bidder/tenderer", "bid/tendered", "bidding/tendering", etc.) are synonymous, and day means calendar day.

2 SOURCE OF FUNDS

2.1 The source of funds is as stated in the Bidding Data Sheet.

3 ELIGIBLE BIDDERS

3.1 This invitation to bid is open to all eligible Contractors as stated in the Bidding data sheet. Bidders shall provide evidence of their eligibility to the satisfaction of the Employer as requested.

3.2 The bidders, including all members of a Joint venture (if applicable) and all subcontractors shall not be affiliated with a firm or entity:

- (i) that has provided consulting services related to the Works to the Employer during the preparatory stages of the Works or of the Project of which the Works form a part, or
- (ii) that has been hired (or is proposed to be hired) by the Employer as Engineer for the contract.

4 ELIGIBLE MATERIALS, EQUIPMENT AND PLANT

4.1 The materials, Plant or Contractor's Equipment, other supplies, and services to be supplied under the Contract, shall have their origin in eligible source countries as defined in the Bidding Data Sheet, and all expenditures made under the Contract will be limited to such materials, Plant or Contractor's Equipment, other supplies, and services.

4.2 For purposes of Sub-Clause 4.1 above, "origin" means the place where the materials, Plant, equipment, and other supplies are mined, grown, produced, or manufactured, and from which the services are supplied.

5 QUALIFICATION OF THE BIDDER

5.1 To be qualified for award of the Contract, bidders shall provide the following information with their bid. Foreign Companies shall not submit information mentioned in items d, e and f of this clause.

All certificates should be **originals** or **legally certified copies of the originals** otherwise the bidder's bid will be rejected.

- a) Legally certified copies of original documents defining the constitution or legal status, place of registration and principal place of business;
- b) A written power of attorney authorizing the signatory of the bid to commit the bid;
- c) Receipt for purchase of the bid documents;
- d) Certificate of quittance issued by the National Social Security Fund. Its validity extending beyond the bid opening date.
- e) Certificate of quittance from the Lebanese Order of Public Works and Buildings Contractors. Its validity extending beyond the bid opening date;
- f) Certificate from the Order of Engineers: every Engineer, whether he is a Contractor or an Engineer employed by a company or establishment classified on the basis of his employment thereby, shall enclose in his Bid a certificate confirming his membership to any one of the two Orders of Engineers in Lebanon for the year in which the Bid is submitted;
- g) Major items of construction equipment proposed for carrying out this Contract (Schedule No.1);
- h) The names and CVs of key personnel proposed for administration and execution of this Contract, both on and off site (Schedule No.2);
- i) Proposals for subcontracting any elements of the Works. Bidders should refer to Sub-Clauses 4.1 and 4.3 of the Conditions of Contract (Schedule No.3);

- j) Manufacturers (Schedule No.4);
- k) Bank certificate for access to liquid assets and/or evidence of access to or availability of credit facilities;
- l) Information regarding any current litigation in which the bidder is involved;
- m) Program of work and method statement in sufficient detail to demonstrate the adequacy of the bidder's proposals to meet the technical specifications and the completion time. No alterations or changes can be made to the specifications;
- n) Contractual Commitment completed, stamped and signed;
- o) Certificate indicating the permanent address of the Bidder;
- p) Certificate of Registration of the Company issued by the Ministry of Finance
- q) Additional documents for qualification of the Bidder are required (refer to the Bidding Data Sheet 3.1 & 5.1).

5.2 EVIDENCE OF QUALIFICATION: The information and documents required under the Sub-Section 5.1 “Qualification of Bidders” shall serve as evidence of qualification and of the Tenderer’s capability to carry out the Contract. Unless specifically listed in the Letter of Acceptance or in the Contract Agreement, these information and documents shall not form a Contract Document, but the Bidder will remain responsible for the validity, authenticity, and correctness of the information provided.

5.3 NOT APPLICABLE.

- a) Only eligible contractors are allowed to form a joint venture;
- b) Each partner of the joint venture shall include all the information listed in Sub-Clause 5.1 above;
- c) The Joint Venture Agreement shall be in the form of the sample agreement attached and shall be completed, entered into, and signed by the joint venture partners and submitted with the bid;
- d) One of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
- e) The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract including payment shall be done exclusively with the partner in charge;
- f) In case of a successful bid, the Bidders shall sign the Form of Agreement as to be legally binding on all partners. All partners of the Joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms.

6 ONE BID PER BIDDER

6.1 A firm shall submit only one bid in the same bidding process, either individually as a bidder or as a partner in a joint venture (if applicable). No firm can be a subcontractor while

submitting a bid individually or as a partner of a joint venture (if applicable) in the same bidding process. A firm, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity. A bidder who submits or participates in more than one bid will cause all the proposals in which the bidder has participated to be disqualified.

7 COST OF BIDDING

7.1 The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bid process.

8 SITE VISIT

8.1 The bidder is required at his own risk to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the bidder's own expense.

B. BID DOCUMENTS

9 CONTENT OF BID DOCUMENTS

9.1 The bid documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with Clause 11:

VOLUME 1/4 – BID CONDITIONS AND PROCEDURES / CONDITIONS OF CONTRACT

VOLUME 2/4 – TECHNICAL SPECIFICATIONS

VOLUME 3/4 – BILL OF QUANTITIES

VOLUME 4/4 – DRAWINGS

9.2 The bidder is expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Pursuant to Clause 28, bids which are not substantially responsive to the requirements of the bid documents will be rejected.

9.3 The bidder shall treat the Bid Documents as private and confidential (except as may be necessary for the purpose of bidding) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere. The Bid Documents shall not be used for any purpose other than that for which they are intended.

10 CLARIFICATION OF BID DOCUMENTS

10.1 A prospective bidder requiring any clarification of the bid documents may notify the Employer in writing delivered by hand or by facsimile at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification, which he receives earlier than 10 days prior to the deadline for submission of bids. CDR should respond earlier than six days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bid documents, including a description of the inquiry but without identifying its source. Clarification will be published on the electronic central platform of the Public Procurement Authority.

10.2 Except as provided for in this clause no representation, explanation or statement made to a bidder prior to the Employer's written acceptance of his tender whether by the Engineer or any of his assistants or by any officer or member of the Employer's staff or by anyone as to the meaning of any of the documents forming the Contract or as to anything to be done or not to be done by the Contractor shall bind the Employer or fetter or bind the judgment or powers of the Engineer in the exercise by him of his duties under the Contract.

11 AMENDMENT OF BID DOCUMENTS

11.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the bid documents by issuing addenda.

11.2 Any addendum thus issued shall be part of the bid documents pursuant to Sub-Clause 9.1, and shall be communicated in writing or by facsimile to all purchasers of the bid documents. Prospective bidders shall acknowledge receipt of each addendum in writing by hand or facsimile to the Employer. Any addendum will be published on the electronic central platform of the Public Procurement Authority.

11.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall, if deemed necessary, extend the deadline for submission of bids, in accordance with Clause 22.

C. PREPARATION OF BIDS

12 LANGUAGE OF BID

12.1 The bid, and all correspondence and documents related to the bid exchanged by the bidder and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the bidder may be another language provided they are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the bid, the translation shall prevail.

13 COMPLETE BID

13.1 The bid must be for the whole of the Works, fully in accordance with the Bid Documents. A partial bid will not be considered.

13.2 The Form of Bid with its Appendix, the Bill of Quantities, and any other document requiring completion shall be completed. The originals of all Bid Documents, and any copies required to be submitted, shall be completed in indelible ink.

14 BID PRICES

14.1 Unless stated otherwise in the bid documents, the Contract shall be for the whole Works as described in Sub-Clause 1.1, based on the unit rates and prices submitted by the bidder.

14.2 The bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the bidder will not be paid for

by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.

14.3 All duties, taxes (except the VAT) and other levies payable by the Contractor under the Contract, or for any other cause, as of the date of the deadline for submission of bids, shall be included in the rates and prices. On the other hand, the Grand Total Tender Price shall include the VAT. The total VAT shall be inserted separately in the Collection Sheet then added to the prices of all sections to reach the Grand Total Tender Price, unless otherwise instructed in the Bidding Data Sheet.

14.4 The Contract is subject to the VAT rules where applicable, according to the terms of the law 379, dated 14/12/2001 and according to Appendix 2 related to VAT procedure, unless otherwise instructed in the Bidding Data Sheet.

14.5 The bidder shall provide a breakdown of all unit prices contained in the Bills of Quantities:

- a) a breakdown of all unit rates in labor, materials, plant, overhead, profit and other charges.
- b) a breakdown of lump sums items.

The Employer shall have the right to request, and the Contractor shall provide a further breakdown of all unit rates and prices including a detailed breakdown of "other charges".

15 CURRENCIES OF BID AND PAYMENT

15.1 The currencies for the bid and all rates in the Bills of Quantities shall be as stated in the Bidding Data Sheet.

16 BID VALIDITY

16.1 Bids shall remain valid for a period as stipulated in the Bidding Data Sheet beyond the deadline for submission of bids specified in the invitation to bid.

(Validity of the Proposal / Bids) of the Public Procurement Law 244 dated July 19,2021, the validity of the offer shall be extended in the event that the Complaints Authority orders a prohibition period of procedures in accordance with the provisions of Chapter 7 of this Law, for a period of time equivalent to the prohibition period. The bidder shall extend his bid security period accordingly.

16.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or facsimile. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension, and in compliance with Clause 17 in all respects.

17 BID SECURITY

17.1 The bidder shall furnish, as part of his bid, a bid security in the amount stated in the Bidding Data Sheet.

17.2 In case of a Joint- Venture the bid security shall be in the name of the Joint-Venture.

17.3 The bid security shall be in the form of a guarantee from a bank located in Lebanon or a foreign bank with a local branch/affiliate in Lebanon, acceptable to the Employer. The format of the bank guarantee shall be in accordance with the attached sample form of bid security. The bid security shall be valid for the period stated in the Bidding Data Sheet.

17.4 Any bid not accompanied by an acceptable bid security shall be rejected by the Employer and shall be considered as non-responsive.

17.5 The bid securities of unsuccessful bidders will be returned as promptly as possible, but not later than 28 days after the expiration of the period of bid validity.

17.6 The bid security of the successful bidder will be returned when the bidder has signed the Agreement and furnished the required performance security.

17.7 The bid security may be forfeited if:

1. The Bidder withdraws his Bid during the period of bid validity specified in the Form of Bid; or
2. The Bidder, having been notified of the acceptance of his Bid by the Employer during the period of bid validity:
 - a- fails or refuses to execute the Form of Agreement; or
 - b- fails or refuses to furnish (or increase the Performance Security if applicable); or
 - c- refuses to accept the correction of errors in his bid.

18 ALTERNATIVE PROPOSALS BY BIDDERS

18.1 Bidders shall submit offers that comply with the requirements of the Bid Documents, including the technical design as indicated in the drawings and specifications. Alternatives will not be considered.

19 PRE-BID MEETING

19.1 The Pre-Bid meeting & the site visit are compulsory.

19.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

19.3 The bidder is requested, as far as possible, to submit any questions in writing or by cable, to reach the Employer not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted in accordance with the following sub-clause.

19.4 Minutes of the meeting, including the text of the questions raised and the responses given, together with any responses prepared after the meeting, will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in Sub-Clause 9.1 that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 11 and not through the minutes of the pre-bid meeting.

19.5 The Bidder should take into account when preparing his bid that should be awarded the Contract he shall be solely responsible for the operation and construction of the project as a whole (previous and later) and should be aware of the conditions of existing facilities and all construction works. (Phase I and Phase II).

The Bidder's price should be inclusive of the expected total expenses for the proper completion of construction and operation of the whole project.

20 FORMAT AND SIGNING OF BID

20.1 The bidder shall prepare one original and one copy of the documents comprising the bid. The documents shall be clearly marked "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.

20.2 The original and the copy of the bid shall be returned duly completed by writing in indelible ink in the space provided for unit rates and totals. In the case of copies, photocopies are acceptable. All originals and copies shall be signed by a person or persons duly authorized to sign on behalf of the bidder, pursuant to Sub-Clauses 5.1(b) or 5.2(d), as the case may be. All pages of the bid, where entries or amendments have been made, shall be signed by the person or persons signing the bid and stamped.

20.3 The originals of all other documents as listed in Sub-Clause 9.1 shall be stamped and initialed by the person or persons signing the bid.

20.4 The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder. Such corrections shall be initialed by the person or persons signing the bid and shall be made by striking out the original text and inserting the correction by hand using indelible ink; the correction of errors by overtyping with or without the use of correction fluid shall not be permitted. Any bid not complying with this sub-clause shall be rejected by the Employer.

20.5 If the bidder does not submit an original BOQ completed in indelible ink according to clause 20.2, his bid will be rejected by the Employer.

D. SUBMISSION OF BIDS

21 SEALING AND MARKING OF BIDS

21.1 All documents shall be signed, dated, completed and returned in a bid box package, as described in Bid Conditions and Procedures. The bidder shall obtain the bid box from the Employer along with the tender documents. The bidder shall seal the bid box package and address it to:

The Council for Development and Reconstruction
Tenders Department
Tallet Al-Serail, Beirut Lebanon

And shall mark the bid box package with the following identification:
"Bidding Documents for Name of Project as stated in the Bidding Data Sheet"
and the words "Do Not Open before the date stated for the return of bid"

21.2 The bid box package shall contain two separate and sealed inner envelopes marked as **envelope No.1** and **envelope No.2**. Each envelope shall contain one set of original documents and one set of copies clearly marked "ORIGINAL" and "COPY"

The inner Envelope No.1 shall bear the following clear identification:

"Bidding Documents for *Name of Project as stated in the Bidding Data Sheet*"

Envelope No.1 "Administrative and Technical Offer"

Name of Bidder / Address of the Bidder

And shall contain:

- Bid security in the amount and form requested in the Bid Conditions & Procedures
- Completed Contractual Commitment signed and stamped by the Bidder
- Completed Joint Venture Agreement (if applicable), signed and stamped by the Bidders
- All information listed in Section 5: Qualification of the Bidder
- Volume 1: Bid Conditions and Procedures - Conditions of Contract, signed and stamped by the Bidder
- Volume 2: Technical Specifications, signed and stamped by the Bidder
- Volume 4: Drawings, signed and stamped by the Bidder (only original drawings are to be submitted)
- Any addenda issued by the Employer, signed and stamped by the Bidder
- Any other documents required to be completed and submitted by bidders in accordance with these Instructions to Bidders

The inner Envelope No.2 shall bear the following clear identification:

"Bidding Documents for *Name of Project as stated in the Bidding Data Sheet*"

Envelope No.2 "Financial Offer"

Name of Bidder / Address of the Bidder

And shall contain:

- Completed Form of Bid and Appendix signed and stamped by the Bidder
- Volume 3: Priced Bill of Quantities completed, signed and stamped by the Bidder
- A complete breakdown of Bill of Quantities prices detailed to include
 - labour,
 - materials,
 - plant,
 - overheads,
 - profit,
 - and other charges

22 DEADLINE FOR SUBMISSION OF BIDS

22.1 Bids must be received by the Employer at the address specified above no later than the time and date given in the Invitation for Bidders.

22.2 The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

23 LATE BIDS

23.1 Any bid received by the Employer after the deadline for submission of bids prescribed in Clause 22 will be returned unopened to the bidder.

24 MODIFICATION AND WITHDRAWAL OF BIDS

24.1 The bidder may modify or withdraw his bid after bid submission, provided that written notice of the modification or withdrawal, is received by the Employer prior to the deadline for submission of bids.

24.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause 21, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL".

24.3 No bid may be modified by the bidder after the deadline for submission.

24.4 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in the forfeiture of the bid security pursuant to Clause 17.

E. BID OPENING AND EVALUATION

25 BID OPENING

25.1 The Employer will open the bids in the presence of bidder's representatives who choose to attend, at the time and date stated in the Invitation for Bids at the address given for return of bids in Clause 21. The bidders' representatives who are present shall sign a register evidencing their attendance. The bid opening committee will make sure that the administrative and technical offers are satisfactory. The committee will then proceed to open Envelope No. 2 comprising the priced financial offers.

The Bid opening and evaluation procedures may include one or two sessions as stated in the Bidding Data Sheet.

26 PROCESS TO BE CONFIDENTIAL

26.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process even after the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.

27 CLARIFICATION OF BIDS

27.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by facsimile, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause 29.

27.2 From the time of bid opening to the time of Contract award, if any bidder wishes to contact the Employer on any matter related to the bid, he should do so in writing.

27.3 Any effort by the bidder to influence the Employer in the Employer's bid evaluation, bid comparison, or Contract award decisions may result in the rejection of the bidder's bid.

28 EXAMINATION OF BIDS & DETERMINATION OF RESPONSIVENESS

28.1 During the evaluation of Envelope No.1, the Employer will determine whether each bid:

- a) meets the eligibility criteria of Clause 3;
- b) has submitted the requested documents in the Bid Conditions and Procedures;
- c) meets the qualification requirements of Clause 5;
- d) has been properly signed;
- e) is accompanied by the required securities;
- f) is substantially responsive to the requirements of the bid documents;
- g) has provided any clarification and/or substantiation that the Employer may require.

28.2 A substantially responsive bid is one which conforms to all the terms, conditions and specifications of the bid documents, without material deviation or reservation. A material deviation or reservation is one:

- a) which affects in any substantial way the scope, quality or performance of the Works;
- b) which limits in any substantial way, inconsistent with the bid documents, the Employer's rights or the bidder's obligations under the Contract, or
- c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

28.3 If a bid does not meet any of the criteria of Clause 28.1 and 28.2, it will be rejected by the Employer, and may not subsequently be corrected by withdrawal or correction of the non-conforming deviation or reservation.

29 CORRECTION OF ERRORS

29.1 Bids determined to be substantially responsive will be checked by the Employer for arithmetic errors. Errors will be corrected by the Employer as follows:

- a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
- b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern; and
- c) where there is a discount applied to the total bid price including the contingency, the total bid price shall be retained and the discount applied to the unit prices of the Bill of Quantities items, excluding the contingency.

29.2 The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, his bid will be rejected, and the bid security will be forfeited in accordance with Sub-Clause 17.7 (c).

30 CONVERSION TO SINGLE CURRENCY

Not Used.

31 EVALUATION AND COMPARISON OF BIDS

31.1 The Employer will open Envelope No.2 for bidders determined to be acceptable and substantially responsive in accordance with Clause 28.

31.2 After opening Envelope No.2, the Employer will determine for each bid the Evaluated Bid Price by adjusting the Bid Price and making any correction for errors pursuant to Clause 29.

31.3 If the bid of the successful bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed.

F. AWARD OF CONTRACT

32 PREFERENCE FOR DOMESTIC BIDDERS

Not Used.

33 AWARD

33.1 Subject to Clause 34, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest Evaluated Bid Price pursuant to Clause 31, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of Sub-Clause 3.1; and (b) qualified in accordance with the provisions of Clause 5.

34 EMPLOYER'S RIGHT TO ACCEPT OR TO REJECT ANY OR ALL BIDS

34.1 Notwithstanding Clause 33, the Employer reserves the right to accept or reject any bid, and to annul the bid process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

35 NOTIFICATION OF AWARD

35.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing or by facsimile that his bid has been accepted. This letter shall name the sum, which the Employer will pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract.

35.2 Upon the furnishing by the successful bidder of a performance security, the Employer will notify the other bidders that their bids have been unsuccessful and return their bid security.

36 SIGNING OF AGREEMENT

36.1 The Form of Agreement will be signed at the Employer's Office by both parties and notified to the Contractor.

36.2 The Agreement shall be considered embodying the Employer's Letter of Acceptance referred to in the Conditions of Contract. All actions and/or activities under the Contract that relate to the date of the Letter of acceptance shall be deemed to relate to the date of this Agreement.

37 PERFORMANCE SECURITY

37.1 Within 10 days of the Contract notification, the successful bidder shall furnish to the Employer a performance security in the form of a bank guarantee in an amount of 10 percent of the Contract Price in accordance with the Conditions of Contract. The format of the bank guarantee shall be in accordance with the sample form of performance security included in the Bid Documents.

37.2 The bank guarantee shall be issued by a bank registered and licensed to operate in Lebanon, and acceptable to the Employer

37.3 Failure of the successful bidder to comply with the requirements of Clauses 36 or 37 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

END OF SECTION

BIDDING DATA SHEET

The following Bidding Data Sheet will be part of the Contract.

- 1.1 The works comprise the execution and completion of the “Construction and Operation of Ghadir Sanitary Landfill”, and include, but are not limited to, the following:
- A. Construction:
1. Topographic survey of the area of the project
 2. Operations for Cell #2 and Backfill in Cell #1.
 3. A leachate collection System of pipes, collection pits, pumping units, treatment units are to be designed.
 4. A Gas collection system is to be designed and installed to ensure optimum efficiency in collection and extraction for flaring purposes or power generation, as deemed feasible.
 5. Backfill in Ghadir WWTP reserved area up to +2m level
- B. Operation:
1. Cells are to be backfilled with Solid waste from the treatment plant. Intermediate daily soil covers shall be placed in between layers of Solid waste as per normal practice.
 2. When cells have been filled to level 16m they shall be topped by a final cap consisting of (from bottom to top) a soil layer, a clay layer, a geomembrane, a filter gravel layer with geotextile, an agricultural soil and plantation.
- 2.1 This Contract is funded by the Government of Lebanon.
- 3.1 Eligible bidders are Lebanese contractors who meet the qualifying criteria listed below , and having executed in the last ten years, either a similar project having a value of at least 10 Millions USD, or road project and civil works project, having each a value of at least 5 Million USD, The successful bidding Contractor in this tender undertakes unless he has 10 years of experience in the domain of construction and maintenance of leachate treatment plants and gas collection and flaring systems shall engage the services of a Sub-Contractor having at least 10 years of experience in these domains approved by CDR.
- 3.3 The Bidder is considered acquainted with and aware of the laws in force in the “Republic of Lebanon”, including the new Public Procurement Law no.244 Dated 19/7/2021
- 4.1 The countries and territories eligible under the *Lebanese Law*.
- 5.1(a) The bidder shall submit an official document issued by the lebanese Ministry of Economy and Trade proving that foreign companies: “Partnership Limited by Shares (Société en Commandite par Action)” (شركة توصية مساهمة) or “Stock Companies” (شركة مغفلة) or their branches in Lebanon, are registered in the Ministry of Economy and Trade. This document should be submitted before signing the Contract to the awarded Bidder, if applicable.
- 5.1(b) See additional conditions as stated in Appendix 3 for conditions of contract.

5.1(k) A Bank certificate for access to liquid assets and/or evidence of access to or availability of credit facilities of not less than (2,000,000 USD) *Two Million United States Dollars* or equivalent sufficient to meet the construction cash flow for the above contract for a period of **six (6) months**. The bidder is requested to submit an original bank certificate as per the attached form;

5.1(q) *In order to be qualified for award of the contract, bidders shall provide the additional qualifying criteria below:*

- (a) ***Evidence of suitable personnel*** for the key positions meeting the minimum experience requirement specified below. The bidder is requested to submit detailed curriculum vitae according to the attached qualification form signed by the candidate; each specialist firm shall submit evidence of suitable personnel for their activities. The evaluation of such personnel shall be judged by their experience in similar works.

<i>Position</i>	<i>Total Work/Business Experience (Years)</i>	<i>In Similar Work (Years)</i>
<i>Project Manager</i>	<i>15</i>	<i>10</i>

Landfill Operation:

<i>Position</i>	<i>Total Work Experience (Years)</i>	<i>In Similar Work (Years)</i>
<i>Landfill Operation Manager</i>	<i>10</i>	<i>5</i>
<i>Solid Waste Expert</i>	<i>10</i>	<i>5</i>
<i>Environmental Engineer</i>	<i>10</i>	<i>5</i>
<i>Electro-Mechanical Engineer</i>	<i>10</i>	<i>5</i>

b) Equipment

The Contractor shall include in Schedule No. 1 (Refer to Forms & Schedules) his proposed equipment required on site for completing the Works including testing and commissioning, all in accordance with the requirements of the Contract.

The Contractor should submit full proof (i.e. equipment registration, lease contract, etc.) and details of the arrangement he shall follow to make his proposed equipment in Schedule 1 above available on site. Arrangements may be agreement with local firms, lease, purchase, others, etc.

5.3(g) *Joint Venture is **NOT** allowed in this Contract.*

10.1 All inquiries should clearly indicate the Name of the Project shown in the Bidding Data Sheet Sub-Clause 21.1 and shall be sent by fax to the CDR Tender Department Fax No. 961-1-981255, otherwise it would not be considered.

14.3, 14.4 Include VAT on the BOQ collection sheet.

15.1 The bid and all rates and prices inserted in the Bills of Quantities shall be expressed in *United States Dollars*.

16.1 The bid validity period should remain 120 days beyond the deadline for submission of bids.

17.1 The bidder shall furnish, as part of his bid, a bid security in the amount of *250,000 USD (Two Hundred Fifty Thousand United states Dollars)*.

17.3 The bid security should remain valid up to 28 days after the expiration of the bid validity.

21.1- 21.2 Name of Project **Completion of the Construction & Operation of Ghadir Sanitary Landfill**

25.1 Bid opening will be held in a single session, On the Bid Submittal Date, Envelope No.1 will be opened first for a preliminary verification of the accuracy and completeness of the submitted documents.

Following the complete verification of Envelope No.1, the committee will proceed to open Envelope No. 2 comprising the priced financial offer for the successful bidders.

31.3 After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 37 be increased at the expense of the successful bidder up to 50% of the Contract price to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.

31.4 An Abnormally Low Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the Bid price raises concerns with the Purchaser as to the capability of the Bidder to perform the Contract for the offered Bid price.

In the event of identification of a potentially Abnormally Low Bid, the Purchaser shall seek written clarification from the Bidder, including a detailed price analyses of its Bid price, method statement, source of material and samples and any other requirements of the bidding document.

After evaluation of the price analyses, in the event that the Purchaser determines that the Bidder has failed to demonstrate its capability to perform the contract for the offered Bid price, the Purchaser has the option of rejecting the Bid.

35.3 The Client shall publish the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

- (a) the name and address of the Bidder who presented the best proposal;
- (b) the bid price of the successful Proposal;
- (c) the expiry date of the Standstill Period; and instructions on how to request a debriefing and/or submit a complaint during the Standstill Period.

35.4 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with Clause 35. The Standstill Period commences the day after the date the Client has published his intention to award the contract.

36.3 Upon expiry of the Standstill Period, specified in or any extension thereof, and upon satisfactorily addressing any complaint that has been filed within the Standstill Period, CDR shall, send a notification of award to the successful Bidder, confirming the Client's intention to award the Contract to the successful Bidder and requesting the successful Bidder to sign the draft negotiated Contract within fifteen (15) Business Days from the date of receipt of

such notification. CDR representative shall sign the contract within fifteen (15) Business Days from the date of signature of the Contractor.

37.2 The bid security shall be issued from a reputable bank in Lebanon or a foreign bank through a correspondent bank located in Lebanon, in the form and wording of the form of Bid Security.

38 Lebanese Contractors, who have five projects awarded to them as a result of a tender or direct negotiations with issued notices to commence and not provisionally accepted by CDR regardless of their nature or value, can not obtain the bid documents nor participate in new bids tendered by CDR.

In case the Contractor has four projects with issued notices to commence and not provisionally accepted, he can then participate in unlimited number of bids; in case he was awarded a fifth project, he will then not be dismissed from other bids that he already participated in prior to the date of bid award and contract signature of the above fifth project.

39 For the procedures for making a procurement – related Compliant refer to chapter 7 “procedure of complaints” of the law no. 244 of public procurement in Lebanon dated 29/7/2021.

FORMS & SCHEDULES

FORM OF CONTRACTUAL COMMITMENT

Name of Project:

To: REPUBLIC OF LEBANON
COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

I the undersigned _____ dully authorized to sign
on behalf of _____
having as permanent Address in Lebanon _____

Telephone No.: _____

Facsimile No.: _____

Acknowledge my revision and examination of the Bid Conditions and Procedures, Conditions of Contract, Technical Specifications, Drawings, Bill of Quantities and all other documents pertaining to the execution of the above-named project.

I proclaim that after reviewing and examining the documents which I may not claim to ignore and after visiting, inspecting and examining the Site of the Works and its surroundings and having obtained all required information and being aware of the Contract details, difficulties and obstacles if any, of the required Works.

I pledge, if my Bid is accepted, to execute and complete all the required Works and remedy any defects therein in conformity with the said Conditions of Contract, Specification, Drawings and Bill of Quantities within the Time for completion stated in the Contract Document.

I also acknowledge that I have put the prices and accepted the stipulations stated in the Conditions of Contract, taking into consideration all the Bid Documents and contract conditions and the difficulties that may be encountered, if any, during the execution of the Works.

Date:

Name of Bidder:

Name:

In the capacity of:

Signature:

Address:

(Stamp 50,000 Lebanese Pounds)

FORM OF BID

Name of Project:

To: REPUBLIC OF LEBANON
COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

1- Having examined the Bid Conditions and Procedures, Conditions of Contract, Technical Specifications, Drawings for the execution of the above-named Project, we, the undersigned, offer to execute and complete the said Project and remedy any defects therein in conformity with the said Bid Conditions and Procedures, Conditions of Contract, Technical Specifications, Drawings and Bills of Quantities for the sum of _____ USD (*United States Dollars*) (*including VAT*) or such other sum as may be ascertained in accordance with the said Conditions.

2- We acknowledge that the Appendix forms an integral part of our Bid.

3- We acknowledge that we have received and incorporated the following Addenda in our Bid: _____

4- We undertake, if our bid is accepted, to commence the works as soon as is reasonably possible, but not exceeding 30 days after receipt of the Order to Commence, and to complete the whole of the Works comprised in the Contract within the time for completion stated in the Appendix to Bid.

5- We agree to abide by this Bid for the period of 120 days from the closing date for submission of bids and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6- Unless and until an Agreement is prepared and executed, this Bid together with your written acceptance thereof shall constitute a binding Contract between us.

7- We understand that you are not bound to accept the lowest or any bid you may receive.

Date

Seal and Signature

in the capacity of

duly authorized to sign bids for and on behalf of

Address

Witness

Occupation

Address

FORM OF BID SECURITY (BANK GUARANTEE)

To: Council for Development and Reconstruction
Tallet Al-Sarail
PO Box 11-3170
Beirut, Lebanon

WHEREAS, [Name of Bidder] (hereinafter called "the Bidder") has submitted his bid dated [Date] for the [Name of Project] (hereinafter called "the Bid").

BY THIS GUARANTEE we [Name of Bank] of [Name of Country] having our registered office at _____ (hereinafter called "the Bank") are bound unto the **Council for Development and Reconstruction** (hereinafter called "the Employer") in the sum of _____ USD for which payment well and truly to be made to the said Employer the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 202 ____

THE CONDITIONS of this obligation are:

1. If the bidder withdraws his Bid during the period of bid validity specified in the Form of Bid; or
2. If the Bidder having been notified of the acceptance of his Bid by, the Employer during the period of bid validity:
 - a- fails or refuses to execute the Form of Agreement; or
 - b- fails or refuses to furnish or to increase the Performance Security, or
 - c- refuses to accept the correction of the errors in his Bid,

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him as a result of the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date **148 days** after the deadline for submission of bids or as it may be extended by the Employer at any time prior to this date, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

"Claim(s) under this guarantee is / are payable only in Lebanon by Certified check drawn on Banque du Liban or by a transfer through Banque du Liban to an account in your name at a bank in Lebanon of your choice"

DATE _____ SIGNATURE OF THE BANK _____

IN THE CAPACITY OF _____

WITNESS _____ SEAL _____

_____ (Signature, Name, and Address)

(The bid security submitted by the bidder shall be in strict conformance with the above sample form. Any alternate form/text would result in the rejection of the bid)

FORM OF BANK CERTIFICATE FOR FINANCIAL CAPABILITIES

To: The Council for Development and Reconstruction (CDR) Beirut, Lebanon.

Project:

This letter has been issued upon the request of _____

(Name of Contractor) _____ without any responsibility on our part.

To the best of our knowledge and belief, we hereby certify that _____

[name and address of contractor], at present has access to, or has available liquid assets, lines of credit, unencumbered assets and other financial means, net of other commitments, sufficient to meet the construction cash flow for the above contract and valued at USD for a period ofmonths starting from contract notification date*.

For and on behalf of

_____ *[name of Bank]* _____ *[Date]*

_____ *[Signature of Bank Representative]*

* For Joint Ventures, the partners should submit according to their percentage shown in clause 5.3 of the Bidding Data Sheet, bank certificates amounting to or exceeding the required value stated in the bidding data sheet.

APPENDIX TO BID

	<u>Contract</u> <u>Clause</u>	
Employer	1.1 (a) (i) 68.2 (a)	Council for Development and Reconstruction (CDR) Tallet Al-Serail – PO Box 11-3170 Beirut Central District – Lebanon
Engineer	1.1 (a) (iv) 68.2 (b)	<i>To be notified later.</i>
Subcontracting additional requirements	4.3 a) (v)	the overall percentage of subcontracted works shall not exceed fifty (50%) of the contract price
Amount of performance security	10.1	<p>Performance Security for Construction Works: Ten percent of Construction Works Price (Bill of Quantities excluding Operation Bill) at the time of signing the contract agreement and valid until twenty eight (28) days after the issue of the Defects Liability Certificate related thereto.</p> <p>Performance Security for Landfill Operation: Refer to General Conditions of Contract for Landfill Operation (B – Part I).</p>
Amount to be withheld for delay in submittal of Work Program	14.1	In the case of the Contractor delay in submitting the Work Program beyond 14 days, the Engineer may, following written notice to the Contractor, suspend from the payments due to the Contractor the amounts equivalent to ten percent (10%) of the net amounts of each payment certificate (including any applicable discounts). Such suspension of payment will remain in force until such time as the Contractor has submitted the required program to the approval of the Engineer. No interest shall be due on the suspended amount of payments.
Amount to be withheld for delay in submittal of Revised Work Program	14.2	In the case of the Contractor delay in submitting the revised Work Program beyond 14 days, the Engineer may, following written notice to the Contractor, suspend from the payments due the Contractor the amounts equivalent to five percent (5%) of the net amounts of each payment certificate (including any applicable discounts). Such suspension of payment will remain in force until such time as the Contractor has submitted the required program to the approval of the Engineer. No interest shall be due on the suspended amount of payments.
Minimum amount of third party insurance	23.2	1,000,000 USD (One Million United States Dollars) for any one occurrence with number of occurrences unlimited

Time for issue of notice to commence	41.1	Based on Employer
Possession of Site and Access Thereto	42.1	<p>After site possession and until completion of the works and landfill operations, the Contractor:</p> <ul style="list-style-type: none"> - shall protect the landfill site including operatives and staff, with appropriate means against the intrusion and actions of scavengers and other trespassers on a 24 hours a day 7 days a week basis including official holidays; and - shall ensure that the landfill shall be open 24 hours a day 7 days a week, including official holidays, to receive and landfill municipal solid waste.
Time for completion	43.1	<p>1- Construction Works:</p> <p>1.1) Cell 2a and 2b outstanding work (capping , gas network and main leachate pipe) Completion Works Start at Order to Begin and finish 6 Months later .</p> <p>1.2) Cell 1 Landfilling from +6 m to +16m and landfilling between phase 1 and phase 2 including liner installation, gas boreholes and network , main leachate pipe and landfilling. Start at Order to Begin to be completed by 28 February 2024 , Capping and other works up to 31 May 2024.</p> <p><u>2 - Operation and Maintenance</u></p> <p>2.1) Operation and Maintenance Phase 1 (gas & Leachate)</p> <p>Order to Begin up to 31 May 2025</p> <p>2.2) Operation and Maintenance Cell 2 (Cell 2a & Cell 2b) – Order to Begin up to 31 May 2025</p> <p>2.3) Operation and Maintenance Cell 1 (during landfilling and after landfilling) – Order to Begin up to 31 May 2025</p>
Amount of liquidated damages, and limit of liquidated damages	47.1	<p>Penalties for Construction Works:</p> <p>Daily Penalty for Failure to Complete all the Construction Works :</p> <p>5,000 US\$/day up to a maximum of 250,000 US\$.</p> <p>Penalties for Landfill Operation:</p> <p>Daily Penalty for Failure to carry out Landfilling Operation, 500 US\$/day up to a maximum of 25,000 US\$.</p> <p>After the Start of Landfill Operation, Daily Penalty for Failure to Evacuate all the Waste Quantities delivered: 500 US\$/day.</p> <p>Monthly Performance Financial Penalties: Additional penalties on performance might be imposed as referred</p>

to in the **General Conditions of Contract for Landfill Operation (B – Part I)**.

Defects Liability Period	49.1	Three hundred sixty five (365) days
Variations	51.1	Variations of the works total amount shall not exceed fifteen (15%) of the contact price . Variations due to price Revision Formulae, Taxes increases if any application of New Laws, shall be valuated seperately .
Monthly Statements	60.1	After submitting to the employer allow 28 days for approval then allow 28 days for payment
Minimum amount of interim certificate	60.2	<i>Not Applicable (i.e.: any amount of Monthly Interim Payment Certificates will be certified)</i>
Percentage of retention	60.5	10 per cent of payment
Limit of retention	60.5	10 per cent of Contract Price
Payment of retention Money	60.6	Retention Money (10%) shall be paid to the contractor upon the expiration of the defects liability period for the works
Advance Payment	60.7	Shall be 15% of the contract price , and shall be repaid through percentage deductions at a rate of 25% from the interim payments certificate.
Time of Payment - Interest rate for late payment	60.8	Secured Overnight Financing Rate (SOFR) + 2%
Defects Liability Certificate	62.1	A Defects Liability Certificate for final handing over shall be issued 30 days after the request by the contractor

Date

Seal and Signature

“Joint Venture Agreement” (to be completed and signed by each partner of the bidder and attached to the technical proposal)

SPECIMEN

JOINT VENTURE AGREEMENT

This agreement is made the ____ day of _____ 200_, by and between:

_____, (hereinafter called _____), a company organized under the laws of _____, with its principal office at _____, and its address at _____, hereinafter called _____ of the first part,

and

_____, (hereinafter called _____), a company organized under the laws of _____, with its principal office at _____, and its address at _____, hereinafter called _____ of the second part,

The first and the second party together are hereinafter referred to as “the Parties”.

WHEREAS the Employer, hereinafter called “the Employer” has invited the Parties to submit a proposal for the execution of the following project:

_____ (hereinafter called “the Project”)

WHEREAS the Parties wish to enter into a Joint Venture Agreement in order to be prequalified by the Employer to tender for the Project and, if successful, to execute the Project under a Contract to be awarded by the Employer, hereinafter called “the Contract”;

THE PARTIES HERETO AGREE TO FORM A JOINT VENTURE UNDER THE FOLLOWING TERMS AND CONDITIONS:

1 ESTABLISHMENT OF THE JOINT VENTURE

The Parties hereby agree to constitute themselves as a Joint Venture under the name of _____, hereinafter called “the Joint Venture”.

The Joint Venture shall have its offices at the following address:

The objective of the Joint Venture shall be to execute the Project in accordance with all terms and conditions of a Contract to be signed with the Employer. The Joint Venture shall be comply with all laws and regulations relevant to the establishment and operation of joint ventures in Lebanon and shall be certified by the relevant public notary.

2 LIABILITY

2.1 Notwithstanding any other conditions contained in this joint venture agreement or in any other agreement between the Parties, each of the Parties hereby commits itself to be jointly and severally liable towards the Employer as well as towards any and all CO-contractors and/or subcontractors for the proper execution of all obligations of the Joint Venture in relation to the Contract to be signed with the Employer for the execution of the Project.

2.2 The Parties shall keep each other, both during and after the term of this joint venture agreement, fully indemnified against all losses and damages resulting from gross negligence or breach of contract of one party or their personnel or agents in relation to this agreement as well as to all contracts to be executed by the Joint Venture.

3 REPRESENTATION

For the purpose of this joint venture agreement, the Joint Venture shall be represented by the first party hereto _____ who is hereby authorized by the second party to act on behalf of the Parties of this Joint Venture in all matters related to the submission of the Tender, *the negotiation and signing of the Contract with the Employer, the execution of the Project, including but not limited to the invoicing and receipt of payments, the execution of subcontracts, the incurring of liabilities and receipt of instructions on behalf of all partners of the Joint Venture in relation to the Contract with the Employer during the entire execution period of the said Contract.*

[Note: the level of authority delegated to the leading party must be determined by the JV Partners. If restrictions apply, supplementary "powers of attorney" must be provided to the leading partner prior to signing of the Contract.]

The Parties shall keep the Employer informed at all times of all details concerning the Joint Venture and its authorized representatives.

4 REVENUE DISTRIBUTION

The total payments to the joint venture shall be distributed between the Parties according to the following proportions:

First Party	_____ %
Second Party	_____ %
-----	_____ %

The local taxes calculation shall be based on the above mentioned percentages.

5 EXCLUSIVITY

The Parties shall exclusively work together in connection with the Project. Each party hereto agrees that it has no interest whatsoever directly or indirectly, in any other proposal which may be submitted to the Employer with respect to the execution of the Project.

6 OBLIGATION TO TENDER

The Parties shall fill in and submit to the Employer their relevant prequalification file documents, and if jointly qualified, they shall tender for the Project as a Joint Venture. If the Contract for the execution of the Project is awarded to the Joint Venture, they shall jointly execute the Project under their joint and several responsibility in accordance with the applicable terms and conditions of contract.

7 DURATION

7.1 This joint venture agreement shall enter in to force and effect as of the date first written above.

7.2 This joint venture agreement shall expire if the Joint Venture's tender is rejected or in case the Contract is awarded to another bidder.

7.3 In case the Contract is awarded to the Joint Venture, this joint venture agreement shall remain in force until all obligations of the Parties under the Contract have been fulfilled and each of the Parties have honored its obligations towards the other.

8 RIGHTS OF EMPLOYER

All rights stipulated in this joint venture agreement in favor of the Employer shall be honored by the Parties as if the Employer were a direct beneficiary of this agreement. Consequently, the Parties hereto acknowledge the right of the Employer to act directly on the basis of this agreement against all or any of the Parties hereof.

9 SETTLEMENT OF DISPUTES

The parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this joint venture agreement or the interpretation thereof.

[Note: choose one of the Alternatives and delete the rest]

Alternative 1: Any dispute between the Parties as to the matters arising pursuant to this agreement which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement may be submitted by either party to **the competent Court in the Republic of Lebanon**. Lebanese law shall apply to the interpretation of this agreement.

Alternative 2: Any dispute between the Parties as to the matters arising pursuant to this agreement which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement may be submitted by either party to **arbitration for final settlement in accordance with the procedures applicable under the Laws of the Republic of Lebanon**.

Alternative 3: Any dispute between the Parties as to the matters arising pursuant to this agreement which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement shall be finally settled by either party under **the Rules of Conciliation and Arbitration of the International Chamber of Commerce** by one or more arbitrators appointed in accordance with the said Rules.

Alternative 4 Any other alternative of JV Partners acceptable to the Employer

The Parties hereto have caused this agreement to be executed in three copies, one for each party and one for the Employer, by their duly authorized officers on the date first above written

FOR AND ON BEHALF OF

FOR AND ON BEHALF OF

FIRST PARTY

SECOND PARTY

NAME:

NAME:

TITLE:

TITLE:

SIGNATURE:

SIGNATURE:

STAMP:

STAMP:

SCHEDULE NO. 1
MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT

Description (Type, Model, Make)	No. of Each	Year of Manufacture (Used)	New or Used	Owned or Leased	Estimated CIF Value	Power Rating	Capacity

* The Bidder shall enter in this Schedule under appropriate headings all major items of Contractor's Equipment which he proposes to bring on Site.

SCHEDULE NO. 2 KEY PERSONNEL

Designation	Name and Nationality	Summary of Experience	Qualifications, and Present Occupation
<u>Headquarters:</u> Partner/Director in charge Other key staff (list Below)			
<u>Site Office:</u> Site Superintendent Deputy Superintendent Supervising Engineers Construction Supervisors Other key staff (List below)			

* The Bidder shall list in this Schedule the key personnel that he proposes to employ at headquarters and on site to execute the Works, together with their qualifications, experience, positions held and nationality

**SCHEDULE NO. 3
SUB-CONTRACTORS**

Element	Approximate value	Name and Address of Sub-Contractor	Statement of Similar Works Previously Executed

- * The Bidder shall list in this Schedule those parts of the Works (and their approximate values) for which he proposes to employ sub-contractors, together with the names and addresses of the proposed sub-contractors. The Bidder shall also enter a statement of similar works previously executed by the proposed sub-contractors, including description, location and value of work, year completed, and name and address of employer/engineer. Notwithstanding the provision of this information, the Bidder, if awarded the Contract, will be required to submit applications to subcontract any part of the Works as stated in the Conditions of Contract.

**SCHEDULE NO. 4
MANUFACTURERS**

Goods or Materials	Name of Manufacturer

- * The Bidder shall enter in this Schedule the names of manufacturers (and, where appropriate, model numbers) of major items of goods or materials that he proposes to incorporate in the Works. Notwithstanding the provision of this information, submission of details of goods and materials for approval, as required by the Specification, will be required from the Contractor.

Qualification Form 1

CANDIDATE'S SUMMARY

Name of Bidder

The Bidder should have the proposed candidate sign and date this form

Position		Candidate <input type="checkbox"/> Prime <input type="checkbox"/> Alternate
<i>Candidate Information</i>	1. Name of Candidate	2. Date of birth
	3. Professional qualifications	
<i>Present Employment</i>	4. Name of Employer Address of employer Contact person Telephone Fax	

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company/Project/Position/Relevant technical & management experience

CONDITIONS OF CONTRACT

A – Construction Works

CONDITIONS OF CONTRACT

A – Construction Works

TABLE OF CONTENTS

PREFACE.....	1
1- PART I - GENERAL CONDITIONS	1
2- PART II - CONDITIONS OF PARTICULAR APPLICATION – (COPA).....	1
DEFINITIONS AND INTERPRETATION.....	2
1.1 Definitions	2
ENGINEER AND ENGINEER’S REPRESENTATIVE.....	2
2.1 Engineer’s Duties and Authority	2
ASSIGNMENT AND SUBCONTRACTING.....	3
4.1 Subcontracting	3
4.3 Subcontracting Additional Requirements	3
CONTRACT DOCUMENTS	4
5.1 Language/s and Law	4
5.2 Priority of Contract Documents	4
6.1 Custody and Supply of Drawings and Documents	4
6.5 Failure by Contractor to Submit Drawings	4
7.2 Permanent Works Designed by the Contractor	5
7.4 As-Built Drawings	5
GENERAL OBLIGATIONS.....	5
8.1 Contractor’s General Responsibilities	5
10.1 Performance Security	6
10.2 Period of Validity of Performance Security	6
10.3 Claims under Performance Security	6
10.4 Cost of Performance Security	6
11.1 Inspection of Site	6
14.1 Programme to be Submitted	7
14.2 Revised Programme	8
14.3 Cash Flow Estimate to be Submitted	8
14.5 Report of Delays	8
14.6 Form and Detail of Programme	8
14.7 Progress Reports to be Submitted	8
15.2 Language Ability of Contractor’s Representative	9
16.3 Language Ability of Superintending Staff	9
17.1 Setting-Out	9
19.1 Safety, Security and Protection of the Environment	9
20.4 Employer’s Risks	10
21.1 Insurance of Works and Contractor’s Equipment	10
21.2 Scope of Cover	10
21.4 Exclusions	11
25.1 Evidence and Terms of Insurances	11
25.5 Source of Insurance	11
30.2 Transport of Contractor’s Equipment or Temporary Works	11
30.3 Transport of Materials or Plant	11
33.2 Disposal of Contractor’s Equipment, etc	12
33.3 Engineer’s or Employer’s Temporary Facilities	12
LABOUR.....	13
34.2 Rates of Wages and Conditions of Labour	13
34.3 Employment of Persons in Service of Others	13

34.4	Repatriation of Labour	13
34.5	Housing for Labour	13
34.6	Measures Against Insect and Pest Nuisance	13
34.7	Epidemics	14
34.8	Burial of the Dead	14
34.9	Disorderly Conduct	14
34.10	Visas, Residence and Work Permits Etc.	14
34.11	Identification of Labour	14
34.12	Accidents	14
34.13	Health and Safety	14
34.14	Festivals and Religious Customs	15
34.15	Labour Laws	15
34.16	Supply of Water	15
34.17	Alcoholic Liquor or Drugs	15
36.4	Costs of Tests Not Provided For	15
COMMENCEMENT AND DELAYS		15
41.1	Commencement of Works	15
42.1	Possession of Site and Access Thereto	15
42.2	Failure to Give Possession	15
44.1	Extension of Time for Completion	16
47.1	Liquidated Damages for Delay	16
47.3	Costs of Supervision Resulting from Delays	16
48.1	Taking Over Certificate	16
48.2	Taking-Over of Sections or Parts	17
DEFECTS LIABILITY		17
49.1	Defects Liability Period	17
49.2	Completion of Outstanding Work and Remedying Defects	17
49.5	Extension of Defects Liability	18
ALTERATIONS, ADDITIONS AND OMISSIONS.....		18
51.1	Variations	18
51.2	Instruction for Variations	18
52.1	Valuation of Variations	18
52.2	Power of Engineer to Fix Rates	19
52.3	Variation Exceeds 15 percent	19
PROCEDURE FOR CLAIMS		19
53.1	Notice of Claims	19
53.4	Failure to Comply	20
CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS		20
54.3	Customs Clearance	20
54.9	Temporary Facilities and Services for The Engineer	20
MEASUREMENT		20
56.1	Work to be Measured	20
57.1	Method of Measurement	21
57.2	Breakdown of Lump Sum Items	21
CERTIFICATES AND PAYMENT.....		21
60.1	Monthly Statements	21
60.2	Monthly Payments	22
60.3	Materials and Plant	22
60.4	Place of Payment	23
60.5	Retention Money	23
60.6	Payment of Retention Money	23
60.7	Advance Payment	23
60.8	Time of Payment and Interest	24
60.9	Correction of Certificates	24
60.10	Statement at Completion	24
60.11	Final Statement	25
60.12	Discharge	25
60.13	Final Payment Certificate	25

60.14	Cessation of Employer's Liability	25
62.1	Defects Liability Certificate	26
REMEDIES		26
63.5	Assignment and Subcontracting, Additional Remedies	26
SPECIAL RISKS.....		26
65.2	Special Risks	26
SETTLEMENT OF DISPUTES.....		27
67.1	Engineer's Decision	27
67.2	Amicable Settlement	27
67.3	Jurisdiction	27
NOTICES		27
68.2	Notice to Employer and Engineer	27
DEFAULT OF EMPLOYER		28
69.1	Default of Employer	28
69.4	Contractor's Entitlement to Suspend the Work	28
69.5	Resumption of Work	28
CHANGES IN COST AND LEGISLATION.....		28
70.1	Increase or Decrease of Cost (Price Adjustment)	28
70.2	Subsequent Legislation	32
CURRENCY AND RATES OF EXCHANGE		33
72.2	Currency Proportions	33
72.3	Currencies of Payment for Provisional Sums	33
72.4	Substantial Changes in Currency Requirements	33
ADDITIONAL CLAUSES TAXES, DUTIES AND SHARES.....		33
73.1	Foreign Taxation	33
73.2	Local Taxation	33
73.3	Income Tax on Staff	33
73.4	Duties on Contractor's Equipment	34
MISCELLANEOUS		34
74.1	Illegal Payments	34
75.1	Termination of Contract for Employer's Convenience	34
76.1	Restrictions on Eligibility	34
77.1	Joint Venture and Several Liability	35
78.1	Details to be Confidential	35
79.1	Safety, Health and Environmental Regulations	35

PREFACE

The Conditions of Contract comprise two parts:

Part I - General Conditions

Part II - Conditions of Particular Application (COPA)

1- PART I - GENERAL CONDITIONS OF A-CONSTRUCTION WORKS

The Conditions of Contract, Part I- General Conditions, shall be those forming Part I of the “CONDITIONS OF CONTRACT FOR WORKS OF CIVIL ENGINEERING CONSTRUCTION”, fourth edition 1987, reprinted 1992 with further amendments, published by the FÉDÉRATION INTERNATIONALE DES INGÉNIEURS-CONSEILS (FIDIC) P.O. Box 86, CH 1000 Lausanne 12, Switzerland. Part I is not included in the bidding documents and should be obtained from the above mentioned address. The Contractor is deemed to have full knowledge of the General Conditions.

2- PART II - CONDITIONS OF PARTICULAR APPLICATION - (COPA) OF A-CONSTRUCTION WORKS

The General Conditions are amended and supplemented by the Conditions of Particular Application (COPA), Part II and appendices which follow. In the event of any conflict between the General Conditions, Part I, and the Conditions of Particular Application - Part II, the latter shall govern.

The modified clauses in this PART II represent project particular circumstances and requirements.

Clause numbers in PART II correspond to those in PART I, except for clauses with number higher than 72 for which are additional.

Definitions And Interpretation

1.1 Definitions

Insert the following definitions (as appropriate) to the definitions in Sub-Clause 1.1:

- (a) (i) The "Employer" is:

As stated in the Appendix to Bid

- (a) (iv) The "Engineer" is:

As stated in the Appendix to Bid

- (a) (iv) is also amended by the addition of the following words after the word 'Conditions':
"or any other competent person appointed by the Employer, and notified to the Contractor, to act in capacity of the Engineer, without requiring approval of the Contractor."
- (b) (v) is amended by the addition of the following words at the end:
"The word 'Tender' is synonymous with 'Bid', and the words 'Appendix to Tender' with 'Appendix to Bid' and the words 'Tender Documents' with 'Bidding Documents'."
- (e) (ii) The reference given to be changed to Sub-Clause 60.5.
- (iv) The reference given to be changed to Sub-Clause 60.13.

Engineer and Engineer's Representative

2.1 Engineer's Duties and Authority

Add the following to Sub- Clause 2.1(b):

The Engineer shall obtain the specific approval of the Employer before taking any of the following actions specified in Part I:

- (i) giving consent for the subcontracting of any part of the Works under Clause 4;
- (ii) notifying extension of time or additional cost which is determined under Clause 12;
- (iii) suspending the progress of the Work under Clause 40;
- (iv) determining an extension of time under Clause 44;
- (v) issuing taking over certificates in respect of the Works under Clause 48;
- (vi) issuing a variation under clause 51, except in an emergency situation, as reasonably determined by the Engineer;
- (vii) fixing rates or prices under Clause 52;
- (viii) determining of provisional sums under Clause 58;
- (ix) determining of additional or reduced cost under Clause 70.

Assignment and Subcontracting

4.1 Subcontracting

In paragraph two, covering exceptions for which Engineer's consent is not required:

Delete "(a) the provision of labour";

against (b), delete existing text, and replace with "the purchase of materials or Plant which are in accordance with the standards specified in the Contract, or"

against (c), delete existing text, and replace with "the purchase or the subcontracting of any part of the Works for which the manufacturer or supplier or the Subcontractor is named in the Contract."

Add (d), Maximum aggregate value of subcontracted works shall not exceed the percentage amount of the Contract Price specified in the Appendix to Bid.

4.3 Subcontracting Additional Requirements

Add the following new Sub-Clause 4.3:

"In addition to obtaining the Engineer's consent pursuant to Sub-Clause 4.1, the Contractor shall:

- a) notify the Engineer within 14 days of signing the Contract, and before commencing work on Site, of any parts of the Works he intends to subcontract for which approval of the Engineer is required under Sub-Clause 4.1. For each subcontract the following shall be provided:
 - (i) the name, address and telephone and fax numbers of the Subcontractor;
 - (ii) the nature and scope of the works to be subcontracted;
 - (iii) information on the Subcontractor's experience of similar works and details of the Subcontractor's site supervision, sources of labour and Equipment and financial capabilities, in sufficient detail to enable the Engineer to determine if the Subcontractor is able to undertake and complete the subcontract works within the time and to the standards required by the Contract;
 - (iv) the approximate value of the subcontract works based on the Contract prices;
 - (v) the percentage of (iv) above and the overall percentage of subcontracted works as a proportion of the Contract Price;
 - (vi) confirmation that the subcontract includes terms and conditions and all obligations and responsibilities contained in the Contract, in so far as these apply to the subcontract;
- b) notify the Engineer at least 21 days prior to the date that the Contractor requires approval from the Engineer, of any proposed change to the Subcontractors notified under (a) above and of any additional parts of the Works he intends to subcontract. Similar information to that listed under (a) above shall be given for each subcontract;
- c) include in his monthly reports to the Engineer, details of all subcontracts entered into, the names of the Subcontractors and the numbers of staff and labour for each Subcontractor on Site during the month;

- d) provide, if requested by the Engineer, copies of documents such as wage sheets and details of the names and employment references for site staff and labor, invoices for the supply of materials, etc;
- e) include conditions and requirements in subcontracts similar to those in the Contract regarding assignment and sub-subcontracting the whole or part of the subcontract works including requirements similar to those under (a) to (d) above. Any approval by the Contractor to a Subcontractor regarding such assignment or sub-subcontracting shall be subject to the prior approval of the Engineer.”

Contract Documents

5.1 Language/s and Law

The language is English for this Contract.

- (a) The law is that in force in the Republic of Lebanon.

5.2 Priority of Contract Documents

Delete the documents listed 1- 6 and Substitute:

- (1) The form of Agreement;
- (2) The addendum(s) to Tender Documents (if any);
- (3) The Appendix to Bid
- (4) The Conditions of Particular Application (Part II);
- (5) The General Conditions of Contract (Part I);
- (6) The General Requirements and Preliminaries (if any);
- (7) The Specifications;
- (8) The Drawings;
- (9) The priced Bill of Quantities
- (10) The breakdown of Bill of Quantities prices
- (11) Any other document forming part of the Contract including the Contractor’s Bid insofar as it is not covered by any of the foregoing;

6.1 Custody and Supply of Drawings and Documents

Add the following paragraph at the end of Sub-Clause 6.1:

"The Employer without any obligation will make available, at his premises, all drawings, maps and investigation data relating to the works that are available with the Employer at the time of request by the Contractor. Provision of drawings, maps and investigation data that are not available from the Employer, will be the responsibility of the Contractor at his own expense."

6.3 Disruption of Progress

Insert after the words "drawing or instruction" the words "or approval"

6.4 Delays and Cost of Delay of Drawings

Insert after the words "drawing or instruction" the words "or approval".

6.5 Failure by Contractor to Submit Drawings

Insert after the words "drawings or instructions" the words "or approvals".

7.2 Permanent Works Designed by the Contractor

Add the following at the end of paragraph a.

“At least 30 days prior to commencement of work on any section, the Contractor shall submit his proposed Permanent Work Design to the Engineer for approval. For each section of the works, construction shall not commence before receipt of approval from the Engineer for the relevant Permanent Work Design.”

7.4 As-Built Drawings

Add the following Sub-Clause 7.4:

"The Contractor shall prepare, and keep up-to-date, a complete set of "as-built" records of the execution of the Works, showing the exact "as-built" locations, sizes and details of the work as executed, with cross-references to relevant specifications, schedules of particulars and data sheets. These records shall be stored electronically using computer aided design (CAD) and Geographic Information System (GIS) software which is compatible with the systems used by the Employer and Engineer. Copies of all records shall be kept on the Site for the purpose of preparing and updating the “as-built” documents and drawings. The Contractor shall obtain the consent of the Engineer as to the size, the referencing system, and other pertinent details of the as-built drawings. Three hard copies and one soft copy completed within a period of 4 weeks following the completion of Works or Section shall be submitted to the Engineer’s approval. The Works or Section shall not be considered to be completed for the purposes of taking over in accordance with Clause 48 until the relevant as-built drawings have been submitted to and approved by the Engineer."

General Obligations

8.1 Contractor’s General Responsibilities

Add the following paragraph at the end of Sub- Clause 8.1:

“The Works as completed by the Contractor shall be wholly in accordance with the Contract, as defined therein. The Works shall include any work which is necessary to satisfy the Specification, Schedules, Bills of Quantities or is implied by the Contract. The Contractor shall be responsible for all works not mentioned in the Contract but which may be inferred to be necessary for stability or completion or the safe, reliable and efficient operation of the Works. The Contractor shall, before commencement of works, review the Contract Documents and complete them and shall inform the Engineer of any discrepancy found in the documents or missing work item necessary for the completion of the Works to the required standards. Failure to inform the Engineer will result in the obligation of the Contractor to complete these works at his own expense.

The whole of the construction materials, plant and labour to be provided by the Contractor and the manner and speed of performance of the Works shall be consistent with the terms of the Contract.

Moreover, the Contractor shall provide at his own cost a "Professional Indemnity Insurance", to a value stated in the Appendix to Bid, protecting all parties from errors and omissions of the Contractor from or in connection with the Performance of the Works, and which shall be maintained for one year after final taking over. Terms and conditions of the policy shall be to the satisfaction of the Engineer. Copy of the signed policy shall be sent to the Engineer within 30 days from the Commencement Date, all in accordance with Sub-Clause 25.1 of these Conditions of Contract.”

10.1 Performance Security

Delete Sub-Clause 10.1 and Substitute by the following:

"The Contractor shall provide security for his proper performance of the Contract to the Employer within 10 days after the Contract notification. The Performance Security shall be in the form of a bank guarantee in accordance with the specimen attached hereto. The amount of the bank guarantee shall be 10% of the Contract price. The guarantee shall be payable on the Employer's first demand and issued by a bank located in Lebanon or by a foreign bank through its correspondent bank located in Lebanon. The Performance Security shall be denominated in the currency in which the Contract Price is payable. When providing such security to the Employer, the Contractor shall notify the Engineer of so doing.

Without limitation to the provisions of the preceding paragraph, whenever the Engineer determines an addition to the Contract Price as a result of a change in cost and/or legislation or as result of a variation amounting to more than 15 percent of the original Contract Price, the Contractor, at the Engineer's written request, shall promptly increase the value of the Performance Security by an equal percentage."

The performance security of a Joint Venture shall be in the name of the Joint Venture (if applicable).

10.2 Period of Validity of Performance Security

Delete Sub-Clause 10.2 and Substitute by the following:

"This Guarantee is valid until (*insert date*) or 28days after the date of issuance of the Defects Liability Certificate of the Construction Works, whichever comes later."

10.3 Claims under Performance Security

Delete Sub-Clause 10.3.

10.4 Cost of Performance Security

Add the following new Sub-Clause 10.4:

"The cost of complying with the requirements of this Clause shall be borne by the Contractor."

11.1 Inspection of Site

Delete Sub-Clause 11.1 and Substitute by the following:

"If available the Employer shall have made accessible to the Contractor, before submission by the Contractor of the Tender, such data on hydrological and sub-surface conditions made available to and obtained by or on behalf of the Employer from investigations undertaken relevant to the Works but the Contractor shall be responsible for his own interpretation thereof. The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself (so far as is practicable, having regard to considerations of cost and time) before submitting his Bid, as to:

- a) the form and nature thereof, including the sub-surface conditions,
- b) the hydrological and climatic conditions,

- c) the extent and nature of work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and
- d) the means of access to the site and the accommodation he may require and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his bid."
- e) Traffic conditions and traffic diversion requirements, if applicable.

11.2 Access to Data

Add the following new Sub-Clause

"Whenever data is made available by the Employer in accordance with Sub-Clause 11.1 it shall be deemed to include data listed elsewhere in the Contract as open for inspection at Employer's offices or at the Engineer's premises."

12.2 Not Foreseeable Physical Obstructions and Conditions

Add the following paragraph at end of Sub-Clause 12.2

"No costs shall be payable to the Contractor that are associated with any extension of time determined under this Sub-Clause.

Since the Contractor has to investigate and identify utilities and since this research is within his obligations, the following will not be considered as unforeseeable physical obstructions or conditions:

- (a) any existing utility from whatsoever kind within the Works area, either acknowledged by the Contractor prior to the start of the Works or not,
- (b) the nature of the soil in any part or section of the Works and
- (c) any required partitioning of the Works and temporary usage of incomplete parts or sections of the Works. Such requirement being issued either by the Engineer or by the local authorities."

14.1 Programme to be Submitted

Add the following at the end of Sub-Clause 14.1:

"The Contractor shall submit for approval by the Engineer three (3) hard copies of the programme of works (work schedule) and one soft copy in an approved format within 21 days after the date of the Contract notification. There shall be no excuse for not submitting the baseline and the monthly updated schedules on time and within the required criteria. If the Contractor does not submit the work programme on time and within the required criteria the Engineer may withhold the amount stated in the Appendix to Bid from the next payment certificate and continue to withhold this amount until the payment following the date on which the overdue work programme has been submitted in an approved format".

14.2 Revised Programme

Add the following at the end of Sub-Clause 14.2:

"The Revised programme shall be submitted for approval by the Engineer within 14 days of a request by the Engineer. The Engineer may request the revised programme at any time and for any reason that he sees fit. If the Contractor does not submit the revised programme on time and within the required criteria the Engineer may withhold the amount stated in the Appendix to Bid from the next payment certificate and continue to withhold this amount until the payment following the date on which the overdue revised programme has been submitted in an approved format".

14.3 Cash Flow Estimate to be Submitted

Add the following at the end of Sub-Clause 14.3:

"The detailed Cash Flow Estimate shall be submitted for approval by the Engineer within 21 days after the date of the Contract notification in a format and a level of detail approved by the Engineer. A revised cash flow estimate shall be submitted for approval by the Engineer within 14 days from the date requested by the Engineer."

14.5 Report of Delays

Add the following new Sub-Clause 14.5:

"The contractor shall promptly report in writing to the Engineer the occurrence of any event or condition that might delay or prevent completion of the works in accordance with the programme and indicate steps being taken to meet the situation."

14.6 Form and Detail of Programme

Add the following new Sub-Clause 14.6:

"The programme referred to in Sub-Clauses 14.1 and 14.2 shall indicate all the activities of the Contract in their correct sequence and order with a minimum detail at the Bill Of Quantities level, and shall be based on a precedence network diagram using the Critical Path Method (CPM). The programme shall also be resource loaded (manpower, material and equipment) and cost loaded. This programme shall be the basis for monitoring the progress or otherwise of the works and will be considered as the "Baseline Schedule". The programme shall be computerized and prepared using a professional project management software package approved by the Engineer. This baseline schedule shall be regularly updated and submitted to the Engineer on a regular basis within the first week of every month for the preceding month."

14.7 Progress Reports to be Submitted

Add the following new Sub-Clause 14.7:

The Contractor shall submit to the Engineer reports on the Works progress, including a description of the Contractor's Manpower, Materials and Equipment on Site, in such form and details and at such intervals as the Engineer shall prescribe.

15.2 Language Ability of Contractor's Representative

Add the following new Sub-Clause 15.2:

"If the Contractor's authorized representative is not, in the opinion of the Engineer, fluent in English, the Contractor shall have available on site at all times a competent interpreter to ensure the proper transmission of instruction and information."

16.3 Language Ability of Superintending Staff

Add the following new Sub-Clause 16.3:

"A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of English. The Contractor shall have available on site at all times a sufficient number of competent interpreters to ensure the proper transmission of instructions and information."

17.1 Setting-Out

Add the following after the last paragraph of Sub-Clause 17.1:

"The Contractor shall inform the Engineer sufficiently in advance, not less than 48 hours before, of his intention to set out or give levels for any part of the Works so that timely arrangements may be made for checking or issuing instructions."

The drawings, lines and levels in the original Bidding Documents shall be treated as baseline information and the Contractor shall, without any additional cost and time be responsible for verifications, surveys, preparation of revised drawings and obtaining approval of the Engineer before the starts the works.

The Contractor shall also be responsible for the verification of the survey control points, benchmarks and such other information provided to him, and any errors or delays in the works caused by the Contractor's failure to verify the accuracy for such data will not be an acceptable cause for extension of time and additional cost to the Employer."

19.1 Safety, Security and Protection of the Environment

Add the following to Sub-Clause 19.1:

- "(d) the Contractor shall protect the Works during inclement weather and shall use all reasonable means to proceed with performance of the Works during such weather and to prevent or minimize delays resulting there from,
- (e) use reasonable efforts to keep the Site and the Works clear of unnecessary obstruction so as to avoid danger to persons and provide fencing, lighting, guarding and watching of the works until Completion and taking over,
- (f) the Contractor shall comply with specific Safety, Health and Environmental requirements as issued by the Employer; see Sub-Clause 79.1."

20.4 Employer's Risks

Delete Sub-Clause 20.4 and Substitute by the following:

“The Employer's risks are:

- a) insofar as they directly affect the execution of the Works in the country where the Permanent Works are to be executed:
 - i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies;
 - ii) rebellion, revolution, insurrection, or military or usurped power, or civil war;
 - iii) ionizing radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
 - iv) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds;
 - v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the works;
- b) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent works, except as may be provided for in the Contract;
- c) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
- d) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced Contractor:
 - (i) could not have reasonably foreseen, or
 - (ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:
 - Prevent loss or damage to physical property from occurring by taking appropriate measures, or
 - Insure against such loss or damage.”

21.1 Insurance of Works and Contractor's Equipment

Add the following words at the end of sub-paragraph (a) and immediately before the last word of subparagraph (b) of Sub-Clause 21.1:

"it being understood that such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred,"

21.2 Scope of Cover

Amend subparagraph (a) of Sub-Clause 21.2 by deleting the words "... from the start of work at the Site ... " and by the substitution therefore the words "from the first working day after the Commencement Date".

Add the following as Sub-Clause (c) under Sub-Clause 21.2:

(c) it shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.

21.4 Exclusions

Delete Sub-Clause 21.4 and Substitute by the following:

There shall be no obligation for the insurance in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 paragraphs (a) (i) to (iv) of the Conditions of Particular Application, but shall include for all other Employer risks.

25.1 Evidence and Terms of Insurances

Delete Sub-Clause 25.1 and Substitute by the following:

All insurances required by the Contract shall be effected with insurers approved by the Employer and the terms of all insurance policies shall be approved by the Employer. Before commencing work on Site, the Contractor shall provide evidence to the Employer that the insurances have been effected and, not later than 30 days from the Commencement Date, the Contractor shall provide copies of the policies to the Employer and shall notify the Engineer accordingly.

25.5 Source of Insurance

Add the following new Sub-Clause 25.5:

“The insurers shall be registered at the Ministry of Commerce of the Republic of Lebanon and shall be licensed to operate in Lebanon in accordance with the Lebanese Law.”

30.2 Transport of Contractor’s Equipment or Temporary Works

Retitle sub-Clause 30.2 as: 30.2 Transport of Materials, Plant, Contractor’s Equipment or Temporary Works

Add the words "Materials and Plant" before the phrase " Contractor's Equipment or Temporary Works" in the 4th line.

30.3 Transport of Materials or Plant

Delete this Sub-Clause entirely and Substitute by the following:

The Contractor shall bear responsibility for damages that he may inflict on road facilities pursuant to Clause 30.1 of these Conditions, and for the immediate rectification of any such damages.

31.2 Facilities for Other Contractors

Delete Sub-Clause 31.2 and Substitute by the following:

The Contractor shall, if so instructed by the Engineer or if specified in the Contract, provide any of the following services for the Employer's workmen or any such other contractor or authority carrying out work on or near the Site:

- a) use of road or tracks which the Contractor is responsible to maintain
- b) use of the Contractor's Temporary Works or Equipment
- c) use of any other services instructed by the Engineer

The Engineer shall determine the amount of addition (if any) to the Contract Price in respect of such services in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

The Engineer in determining any additional cost pursuant to this clause will take into consideration wherever the said services provided by the Contractor in accordance with its provisions or the facilities made available in this regard are services or facilities already provided for in the Contract and shall not carry additional costs to the Employer.

33.2 Disposal of Contractor's Equipment, etc.

Add new Sub-Clause 33.2 as follows:

If the Contractor fails to remove any Contractor's Equipment, surplus material and Temporary Works pursuant to Sub-clause 33.1 within such reasonable time after completion of the Works as may be allowed by the Engineer then the Employer may:

- (a) sell any which are the property of the Contractor, and
- (b) return any which are not the property of the Contractor to the owner thereof at the Contractor's expense.

After deducting from any proceeds of sale the costs of and expenses in connection with such sale and return, the Employer shall pay the balance (if any) to the Contractor but to the extent that the proceeds of any sale are insufficient to meet all such costs and expenses, the excess shall be a debt due from the Contractor to the Employer and shall be deductible or recoverable by the Employer from any monies due or that may become due to the Contractor under the Contract or may be recovered by the Employer from the Contractor as a debt due.

33.3 Engineer's or Employer's Temporary Facilities

Add new Sub-Clause 33.3 as follows:

The Contractor shall maintain on Site until the end of the Defects Liability Period or for such shorter period as may be instructed by the Engineer, all temporary facilities provided for the Engineer or the Employer's staff and all facilities and equipment reasonably required by the Engineer for inspection or testing of the Works during the Defects Liability Period.

Labour

Add the following new Sub-Clauses 34.2 to 34.17:

34.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages and observe conditions of labour not less favorable than those established for the trade or industry where the work is carried out. In the absence of any rates of wages or conditions of labour so established, the Contractor shall pay rates of wages and observe conditions of labour which are not less favorable than the general level of wages and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

34.3 Employment of Persons in Service of Others

The Contractor shall not recruit or attempt to recruit his staff and labour from amongst persons in the service of the Employer or the Engineer.

34.4 Repatriation of Labour

The Contractor shall be responsible for the return to the place where they were recruited or to their domicile of all such persons as he has recruited and employed for the purposes of or in connection with the Contract and shall maintain such persons as are to be so returned in a suitable manner until they have left the Site or, in the case of persons who are not nationals of and have been recruited outside Lebanon, shall have left Lebanon.

34.5 Housing for Labour

Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labor, employed for the purposes of or in connection with the Contract, including all fencing, water supply (both for drinking and other purposes), electricity supply, sanitation, cook house, fire prevention and fire fighting equipment, air conditioning, cookers, refrigerators, furniture and other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camp/housing provided by the Contractor shall be removed and the site reinstated to its original condition, all to the approval of the Engineer.

34.6 Measures Against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect nuisance, rats, and other pests and reduce the dangers to health and the general nuisance caused by the same. If necessary, the Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria, and take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticide all buildings erected on the site. Such treatment shall be carried out at least once a month or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of local hazards.

34.7 Epidemics

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.

34.8 Burial of the Dead

The Contractor shall make any necessary arrangements for the transport, to any place required for burial, of any of his expatriate employees or members of their families who may die in Lebanon. The Contractor shall also be responsible for making any arrangements with regard to burial of any of his local employees who may die while engaged upon the works.

34.9 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his staff and labour and to preserve the peace and to protect persons and property in the neighborhood of the Works against such conduct.

34.10 Visas, Residence and Work Permits Etc.

The Contractor shall obtain all visas, residence permits, work permits and other permissions required for the employment of expatriate personnel. The Employer will provide assistance in obtaining such visas and permits but without thereby incurring any liability towards the Contractor.

34.11 Identification of Labour

All staff and labour on the Site shall be provided with identification as follows:

- (a) identification badges incorporating the name and the photograph of the person and the name of the direct employer (Contractor, Subcontractor, etc.).
- (b) hard hats with the name of the direct employer.

34.12 Accidents

The Contractor shall have in his staff on Site an officer dealing with questions regarding the safety and protection against accidents of all staff and labor. In the event of an accident, the Contractor shall immediately inform the engineer and shall give a full written report of the accident to the engineer. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents. The name and qualification of this safety officer shall be submitted to the Engineer within 14 days of the notice of commencement of works.

34.13 Health and Safety

Due precautions shall be taken by the Contractor to ensure the safety of his staff and labour and, in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance service are available at the camps, housing and on the Site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

34.14 Festivals and Religious Customs

The Contractor shall in all dealings with his staff and labour have due regard to all recognized festivals, days of rest and religious or other customs.

34.15 Labour Laws

The Contractor shall comply with all laws and regulations regarding the employment of labour in Lebanon, including any laws or regulations that come into force after the date of the Bid.

34.16 Supply of Water

The Contractor shall provide on the Site an adequate supply of drinking and other water for the use of his staff and labour.

34.17 Alcoholic Liquor or Drugs

The Contractor shall not sell or give to any person nor allow the importation on to the Site or to any accommodation provided for his labor, of alcoholic liquor or narcotic drugs.

36.4 Costs of Tests Not Provided For

Add the words "those stated in the Contract or" before the words "the Site" in the 2nd line of sub-paragraph (c).

Commencement and Delays

41.1 Commencement of Works

Add the following words "but not exceeding 30 days" after the words "as soon as is reasonably possible"

Replace "the Engineer" in the second line by "the Employer".

42.1 Possession of Site and Access Thereto

Replace "the Engineer's notice to commence" in paragraph (b) with "Employer's notice to commence".

Add a final paragraph as follows:

"The Contractor shall not commence work on any Section or site unless he has given 14 days' written notice to the Engineer of his intention to do so, and the work on the site in question is shown on the latest programme consented to in accordance with Sub-Clause 14.1 at the appropriate date. Before commencing any work the Contractor shall have agreed with the Engineer any survey of original ground levels and other records of existing works which may be required by the Engineer for measurement and as-built records."

42.2 Failure to Give Possession

Delete paragraph (b).

44.1 Extension of Time for Completion

Add the following paragraph at the end of Sub-Clause 44.1:

"In determining any extension of the Time for Completion under this Sub-Clause, the Engineer shall be entitled to take into account the effect of work omitted by any order issued by him pursuant to Sub-Clause 51.1 but he shall have no power to reduce the Time for Completion stated in the Appendix to Bid."

Notwithstanding any provisions to the contrary elsewhere in these conditions, there shall be no costs to be paid to the Contractor in respect of any extension of time granted to the Contractor

47.1 Liquidated Damages for Delay

Add the phrase "except for any monies payable pursuant to Sub-Clause 47.3" after the words "such default" in line 6.

Add the following at the end of Sub-Clause 47.1:

The liquidated damages shall be payable in the currencies and proportions in which the Contract Price is payable.

47.3 Costs of Supervision Resulting from Delays

Add new Sub-Clause 47.3 as follows:

"In addition to the damages stipulated in Sub-Clause 47.1, the Contractor shall be obliged to bear the additional cost for the Engineer during the period of delays, If the delay exceeds 20% of the programmed Contract Period, submitted by the Contractor in accordance with sub-clause 14.1, and results from an action or omission by the Contractor as determined by the Engineer. This additional cost for the Engineer shall be calculated on the basis of the Engineer's remuneration from the Employer for his services on the Contract and as follows:

- (a) if the delay is determined to be solely due to the Contractor's actions or inaction, then the Contractor shall bear 50% of the Engineer's supervision fees for the period exceeding 20% of the Contract Period as defined in Sub- Clause 47.3.
- (b) if the delay is determined to be due to both the Contractor's and Engineer's actions or inaction, then the Contractor shall bear 25% of the Engineer's supervision fees for the period exceeding 20% of the Contract Period as defined in Sub- Clause 47.3.

48.1 Taking Over Certificate

Add the following paragraph at the end of Sub-Clause 48.1:

"Provided that, in any case, no Taking Over Certificate shall be issued or shall be deemed to have been issued until the Contractor has provided to the Engineer:

- (a) operation and maintenance manuals required under the Contract in respect of the Works or Section, and
- (b) the as-built drawings and final measurements for the Works or Section.

Notwithstanding any provisions to the contrary elsewhere in this Clause, the Employer shall issue or authorize the Engineer on his behalf to issue the Taking-Over Certificate for the whole of the Works, and for sections or parts of the Works.”

48.2 Taking-Over of Sections or Parts

Add the following paragraphs at the end of Sub-Clause 48.2:

“Notwithstanding the foregoing, no Taking– Over Certificate shall be issued until all work including plants, civil, electrical, mechanical and rehabilitation works within a section have been substantially completed and all damage to public or particular properties has been substantially repaired.

The Contractor shall take into consideration that putting new services and utilities into operation during construction and opening of new roads or sections of constructed roads to traffic during construction shall not constitute a case for Taking-Over of sections or parts under Sub- Clauses 48.2(b) and 48.2(c) unless provided for elsewhere under the Contract.”

Defects Liability

49.1 Defects Liability Period

Add the following paragraph at the end of Sub-Clause 49.1:

"The Defects Liability Period for this Contract is mentioned in the Appendix to Bid. However, with respect to defects appearing after the interconnection of two or more sections which have been taken over separately, the Contractor's responsibility shall remain to exist for all interconnected sections until the latest of the defects Liability Periods have expired".

49.2 Completion of Outstanding Work and Remedying Defects

Delete Sub-Clause 49.2 and Substitute the following:

To the intent that the Works shall, at or as soon practicable after the issue of the Taking-Over Certificate and prior to the expiration of the Defects Liability Period, be delivered to the Employer in the Condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall:

- a) attend to and complete and/or correct all work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, but in any event within 28 days of the date of issue of such Taking-Over Certificate and,
- b) execute all such work of amendment or reconstruction, and remedying defects, shrinkages or other faults as the Engineer may, whether during or within 14 days of the expiration of the relevant Defects Liability Period, as a result of inspections made by or behalf of the Engineer prior to its expiration, instruct the Contractor to execute. The Contractor shall attend to execute all such work as soon as practicable, but in any event within 14 days of the date of receipt of such instructions.

Provided that at all times due regard shall be taken by the Contractor to occupancy, operational and utilization requirements of the Taken-Over Works, and reasonable arrangements be made for access to enable execution and completion of all such work and remedying all such defects within the times prescribed or other times as may be agreed giving regard to occupancy, operation and utilization.

49.5 Extension of Defects Liability

Add the following new Sub-Clause 49.5:

"The provisions of this Clause shall apply to all replacements or renewals of Plant carried out by the Contractor to remedy defects and damages as if the replacements and renewals had been taken over on the date they were completed. The Defects Liability Period for the Works shall be extended by a period equal to the period during which the works cannot be used by reason of a defect or damage. If only part of the Works is affected the Defects Liability Period shall be extended only for that part. In neither case shall the Defects Liability Period extend beyond 3 years from the date of taking over.

When progress in respect of plant has been suspended under Clause 40, the Contractor's obligations under this Clause shall not apply to any defects occurring more than 2 Years after the Time for Completion established on the date of the Letter of Acceptance".

Alterations, Additions and Omissions

51.1 Variations

Delete Sub clause 51.1 (b) and substitute by the following:

(b) omit any such work without payment to the Contractor of any monetary compensation, including but not limited to loss of profit and overhead recovery on the omitted works.

Add at the end of Sub clause 51.1 the following:

Sub Clause 51.1 shall comply with article 29 PPL

As stipulated in Article 29 (The contract value and the conditions of its modifications) of the Public Procurement Law 244 dated July 19, 2021, any information upon modification of the contract value shall be published on CDR website, and on the central electronic platform of the Public Procurement Authority.

51.2 Instruction for Variations

Delete Sub clause 51.2 and substitute by the following:

"The Contractor shall not make any such variation without an instruction of the Engineer. The Contractor shall proceed with the varied work immediately upon receipt of an instruction to that effect from the Engineer, regardless of whether or not an agreement on price has been reached."

52.1 Valuation of Variations

Add the following paragraphs at the end of Sub- Clause 52.1:

"For the purpose of evaluating and agreeing suitable rates or prices as prescribed under Sub-Clause 52.1 and this Sub-Clause 52.2, the Contractor shall, whenever so requested by the Engineer, submit to the Engineer a complete, substantiated build up of his proposed rates and/or prices in such detail and format required by the Engineer, allocated to component costs of 'labour', 'materials', 'plant', 'equipment', 'other charges' and 'overhead and profit'. If the Contract rates and prices cannot be used as a basis for valuation due to the absence of comparable items in the Contract, the Contractor shall

submit to the Engineer a complete substantiated build up of the rate and/or prices in such detail and format required by the Engineer including the direct cost of labour, materials, plant, equipment and other charges and overhead and profit.”

52.2 Power of Engineer to Fix Rates

Add the following paragraph at the end of first paragraph of Sub-Clause 52.2:

"Provided further that no change in the unit rates or prices for any item contained in the Contract shall be considered unless the final quantity of the work done increases by more than 25% from the quantity set out in the Bill of Quantities for the particular item and the change exceeds an amount of more than 2% of the Contract Price. Rate adjustment shall be applicable only to quantities in excess of 25% over the original quantity entered in the Bill of Quantities for any applicable item. Rate adjustment is applicable in case of variation order or re-measurement of quantities."

Add the following at the end of Sub-Clause 52.2:

"Where the Contract provides for the payment of the Contract Price in more than one currency, the amount or proportion payable in each of the applicable currencies shall be specified when the rates or prices are agreed, fixed, or determined as stated above, it being understood that in specifying these amounts or proportions the Contractor and the Engineer (or, failing agreement, the Engineer) shall take into account the actual or expected currencies of cost (and the proportions thereof) of the inputs of the varied work without regard to the proportions of various currencies specified in the Appendix to Bid for payment of the Contract Price".

52.3 Variation Exceeds 15 percent

Replace '15 percent' with '25 percent' wherever it occurs in this Clause.

Add the following at the end of Sub-Clause 52.3:

“The effect on the final Contract Price due to remeasurement shall not be considered within the 25% addition or omission referenced in Sub-Clause 52.3.

Where the Contract provides for the payment of the Contract Price in more than one currency, the amount or proportion payable in each of the applicable currencies shall be specified when such further sum is agreed or determined, it being understood that in specifying these amounts or proportions the Contractor and the Engineer (or, failing agreement, the Engineer) shall take into account the currencies (and the proportions thereof) in which the Contractor's Site and general overhead cost of the Contract were incurred without being bound by the proportions of various currencies specified in the Appendix to Bid for payment of the Contract Price".

Procedure for Claims

53.1 Notice of Claims

Add the following at the end of the paragraph:

“If the Contractor fails to give notice of claim within such period of 28 days, then the contractor shall not be entitled to additional payment, the time period shall not be extended and the Employer shall be discharged from all liability in connection with the claim.

The Contractor shall also submit other notices which are required by the Contract and any particulars and contemporary records supporting the claim, all as relevant to such event or circumstance.

53.4 Failure to Comply

Delete Sub clause 53.4 and substitute by the following:

If the Contractor fails to comply with any of the provisions in this Clause in respect of any claim which he seeks to make, he shall not be entitled to any additional payment.

Notwithstanding any other provision of the Contract, including without limitation the provisions of Sub-Clause 6.14 of the Conditions of Contract, if the Contractor fails to comply with any of the provisions of the Contract, including without limitation the provisions of Sub-Clauses 6.4, 44.1, 44.2, 44.3, 53.1, 53.2 and/or 53.3 of the Conditions of Contract, in respect of any act, event or omission of whatever nature which in the opinion of the Contractor should result in an increase in the Contract Price and/or an extension of the Time for Completion, such failure shall constitute on the part of the Contractor a definitive and irrevocable waiver of, and release of the Engineer and the Employer from, any and all claims arising from any such act, event or omission and the Contractor shall be irrevocably stopped from raising any claims arising from any such act, event or omission thereafter.

Contractor's Equipment, Temporary Works and Materials

54.3 Customs Clearance

Delete Sub-Clause 54.3 and substitute by the following:

The Contractor shall be solely responsible for obtaining clearance through customs for Contractor's Equipment, materials etc. imported for the Works.

54.9 Temporary Facilities and Services for The Engineer

Add the following new Sub-Clause 54.9:

"If the Contractor fails to provide and maintain any of the Temporary Works and services required for the use of the Engineer's Representative and his staff and for the use of the employer's Representative if applicable, then the Employer shall after serving a notice to the Contractor specifying this default be entitled to provide and maintain such Temporary Works and services and shall be entitled to recover from the Contractor the cost thereof or may deduct the same from any monies due or that become due to the Contractor."

Measurement

56.1 Work to be Measured

Add the following at the end of Sub-Clause 56.1:

"For the purpose of ascertaining and determining the value of the Works as stated in this Clause, the Measurement of the Works as executed and associated As-Built Drawings shall be carried out by the Contractor progressively and timely, and submitted to the Engineer for his approval".

57.1 Method of Measurement

Delete Sub-Clause 57.1 and Substitute by the following:

The Works shall be measured net in accordance with the Method of Measurement included with the Specification and in accordance with the descriptions of items and preambles stated in the Specification and Bill of Quantities.

57.2 Breakdown of Lump Sum Items

Retitle Sub-Clause 57.2 as “Breakdown of Lump Sum Items and Unit Rates”

Delete the text of Sub-Clause 57.2 and Substitute with the following:

For the purposes of statements, under Sub-Clause 60.1, the Contractor shall submit with his Bid the following information concerning the Contract Price:

- (a) a breakdown of all lump sums included in the bid;
- (b) a breakdown of all unit rates and prices contained in the priced Bill of Quantities, showing the costs of labour, materials, plant, equipment and other charges;

The Engineer shall have the right to request, and the Contractor shall provide a further breakdown of all unit rates and prices including a detailed breakdown of "other charges".

Certificates and Payment

Delete Sub-Clauses 60.1 to 60.10 and Substitute with the following Sub-Clauses 60.1 to 60.14.

60.1 Monthly Statements

The Contractor shall submit a statement in 2 copies to the Engineer at the end of each month, in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable, which shall be taken into account in the sequence listed:

- a) the estimated Contract value of the Temporary and Permanent Works executed up to the end of the month in question, determined in accordance with Sub-Clause 56.1, at the unit rates and prices included in the Contract;
- b) the actual value certified for payment for the Temporary and Permanent Works executed up to the end of the previous month, at the unit rates and prices included in the Contract;
- c) the estimated Contract value at the unit rates and prices included in the Contract of the Temporary and Permanent Works for the month in question obtained by deducting (b) from (a);
- d) the value of any variations executed up to the month in question, less the amount certified in the previous Interim Payment Certificate, expressed in the relevant amounts of foreign and local currencies, pursuant to Clause 52;

- e) any amount to be withheld under;
 - (i) the retention provision of Sub-Clause 60.5, determined by applying the percentage set forth in Sub-Clause 60.5 and,
 - (ii) the suspension and payment deduction provisions of Sub-Clause 79.1 Safety, Health and Environmental Regulations;
 - (iii) the withholding provisions of Sub-Clauses 14.1 and 14.2;
- f) any amount to be deducted as repayment of the Advance Payment under the provision of Sub-Clause 60.7.
- g) Subject to the Conditions of Contract and to item (h) of this sub-clause, any other sum expressed in the applicable currency or currencies to which the Contractor may be entitled to under the Contract.
- h) The Employer's financial procedures require that overrun in quantities of Bill of Quantities and items with new rates or for extra payment, be processed in the form of comparative schedules of quantities and approved by the Employer prior to inclusion for payment in the interim certificates.

60.2 Monthly Payments

The Contractor's statements shall be approved or amended by the Engineer in such a way that in his opinion, it reflects the amounts due to the Contractor in accordance with the Contract, after deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer. In cases where there is a difference of opinion as to the value of any item, the Engineer's view shall prevail.

Within 28 days of receipt of the monthly statement referred to in Sub-Clause 60.1, the Engineer shall determine the amounts due to the Contractor and shall issue to the Employer and the Contractor a certificate herein called "Interim Payment Certificate", certifying the amounts to the Contractor.

Provided that the Engineer shall not be bound to certify any payment under this sub-clause if the net amount thereof, after all retentions and deductions, would be less than the Minimum Amount of Interim Payment Certificates stated in the Appendix to Tender. However, in such case, the unpaid certificate amount will be added to the next interim payment, and the cumulative unpaid certified amount will be compared to the minimum amount of interim payment.

Payment items of TEMPORARY WORKS AND SERVICES if listed in the Bill of Quantities shall be paid as well be certified by the Engineer taking regard to the initial running and closing out components of these works and shall also be progress related to the execution of the permanent works.

Notwithstanding the terms of this Clause or any clause of the Contract, no amount will be certified by the Engineer for payment until the performance security has been provided by the Contractor and approved by the Employer.

60.3 Materials and Plant

This Contract is not subject for payment of materials brought by the Contractor and stored on the Site for incorporation in the Permanent Works. The Contractor shall be deemed to have included for this procedure in his unit rates and Contract Price.

60.4 Place and Mode of Payment

Payments to the Contractor by the Employer shall be made in the currencies in which the Contract Price is payable.

Mode of Payment: Payments will be made as stipulated in the Appendix to Bid.

60.5 Retention Money

A retention amounting to the percentage stipulated in the Appendix to Bid of the amounts due in each currency, determined in accordance with the procedure set out in Sub-Clause 60.1(e) shall be made on all payments under this Contract, except the advance payment. If no, or no other, percentage is mentioned in the Appendix to Bid, the percentage of the retention shall be 10%.

60.6 Payment of Retention Money

Upon the issue of the Taking-Over Certificate with respect to the whole of the Works, one half of the Retention Money shall be certified by the Engineer for payment to the Contractor. Upon the issue of a Taking-Over Certificate with respect to a Section or part of the permanent works only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the permanent works, will be certified by the Engineer for payment to the Contractor.

Upon the expiration of the Defects Liability Period for the Works the other half of the Retention money shall be certified by the Engineer for payment to the Contractor, provided that, in the event of different Defects Liability Periods being applicable to different sections or Parts of the Permanent works pursuant to Clause 48, the expression "expiration of the Defects Liability period" shall, for the purposes of this Sub-Clause, be deemed to mean the expiration of the latest of such periods.

Provided also that if at such time, there shall remain to be executed by the Contractor any work instructed, pursuant to Clause 49 and 50, in respect of the Works, the Engineer shall be entitled to withhold certification until completion of such work of so much of the balance of the Retention Money as shall, in the opinion of the Engineer, represent the cost of the work remaining to be executed.

60.7 Advance Payment

Unless agreed otherwise in the Contract Agreement, the Employer will make an interest-free Advance Payment to the Contractor in an amount stated in the Appendix to Bid. The advance payment shall be used exclusively towards site mobilization, launching of works, material purchase at an early stage of the project, for the purpose of limiting the contractor burden related to price variation. Payment of such advance amount will be due under separate certification by the Engineer after (a) execution of the Contract Agreement thereto; (b) provision by the Contractor of the performance security in accordance with Sub Clause 10.1; (c) provision by the Contractor, of an unconditional bank guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment; and (d) issuance of a notice of commencement of Works by the Employer. Such bank guarantee shall remain effective until the advance payment has been repaid pursuant to the paragraph below, but the amount thereof shall be progressively reduced by the amount repaid by the Contractor as indicated in interim Payment Certificates issued in accordance with this Clause.

The Advance Payment shall be repaid through percentage deductions at a rate stated in the Appendix to bid from the interim payments certified by the Engineer in accordance with this clause until such time the advance payment has been fully repaid; always provided that the advance payment shall be completely repaid prior to the time when 80 percent of the Contract Price has been certified for payment.

60.8 Time of Payment and Interest

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this clause, or to any other term of the Contract, shall, subject to clause 47, be paid by the Employer to the Contractor within 60 days after the Contractor's monthly statement certified by the Engineer has been received by the Employer, in the case of the final Certificate pursuant to Sub-Clause 60.13 within 84 days after the agreed and certified Final Statement by the Engineer and written discharge have been received by the Employer. In the event of the failure of the Employer to make payments within the time stated, then the Employer shall pay to the contractor simple annual interest at the rate stated in the Appendix to Form of Bid.

The Contractor shall not be entitled to compound interest under any circumstances.

60.9 Correction of Certificates

The Engineer may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate which has been issued by him, and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

60.10 Statement at Completion

Not later than 56 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer a draft Statement at Completion fully substantiated with supporting documents showing in detail, as approved by the Engineer, and subject to all supporting final measurement to have been previously prepared and submitted by the Contractor to the Engineer in accordance with the Contract:

- (a) The final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate.
- (b) Any further sums which the Contractor considers to be due, and
- (c) An estimate of amounts which the Contractor considers will become due to him under the Contract. Such estimated amounts, fully substantiated, in detail as approved by the Engineer, shall be shown separately in such Statement at Completion. Claims and new rates that have not been previously duly notified and particularised by the Contractor under the Contract, although may be listed, shall be processed separately by the Contractor under the applicable Clauses of the Contract and shall not be due for any certification by the Engineer within the Interim Certificate that may be issued in respect of the Statement at Completion

The Statement at Completion shall thus be Contractor's total statement for all sums he considers to be his entitlement under the Contract excepting the second portion of the Retention money and other works that may arise as may be instructed during the Defects Liability Period.

If the Engineer disagrees with or cannot verify any part of the draft Statement at Completion the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the Statement as may be agreed between them. The Contractor shall then prepare and submit to the Engineer a revised Statement at Completion as agreed (for the purposed of these Conditions referred to as the Statement at Completion)

If following discussions between the Engineer and the Contractor and any changes to the draft Statement at Completion which may be agreed between them, it becomes evident that a non-conformity or a dispute exists, the Engineer shall issue to the Employer an Interim Payment

Certificate for those parts of the draft Statement at Completion which are not in dispute or not in non-conformity. The non-conformity or dispute shall then be settled in accordance with Clause 53 or Clause 67 respectively. The Statement at Completion shall then be agreed upon settlement of the non-conformity or/and the dispute as the case may be.

60.11 Final Statement

Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub Clause 62.1, the Contractor shall submit to the Engineer for consideration a draft Final Statement with supporting documents showing in detail, in the form approved by the Engineer:

- (a) The value of all work done in accordance with the Contract and all sums due to the Contractor under the Contract as shall have been agreed in the Statement at Completion, and
- (b) the second portion of the Retention Money due, and
- (c) any other sums that are considered due during the Defects Liability Period for further works instructed by the Engineer during such period.

The Engineer shall attend to the draft Final Certificate in the manner prescribed under Sub- Clause 60.10 for the Certificate at Completion and in this regard for the purpose of these conditions the revised Statement submitted by the Contractor as agreed shall be referred to as the “Final Statement”.

60.12 Discharge

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Certificate issued pursuant to Sub-Clause 60.13 has been made and the Performance Security referred to Sub-Clause 10.1 has been returned to the Contractor.

60.13 Final Payment Certificate

Within 28 days after receipt of the Final Statement, and the written discharge, the Engineer shall issue to the Employer (with a copy to the Contractor) a final Certificate stating:

- (a) the amount which, in the opinion of the Engineer, is finally due under the Contract and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled under the Contract, other than Clause 47, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be.

60.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter arising out of or in connection with the Contract or execution of the Works unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters arising after the date of the Taking Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.10.

62.1 Defects Liability Certificate

Delete Sub-clause 62.1 and substitute by the following:

After the expiration of the Defects Liability Period of the whole of the Works, or if different defects liability periods shall become applicable to different sections or parts of the Permanent Works for which the Contractor formally notified its request(s) for inspection and verification that the Contractor has discharged all its obligations with respect to such parts or sections, the expiration of the latest such period, and as soon thereafter as any works instructed pursuant to Clauses 49 and 50, have been completed to the satisfaction of the Engineer, the Contractor may give a notice to that effect to the Engineer with a copy to the Employer. Such notice shall be deemed to be a request by the Contractor to the Engineer and the Employer to issue a Defects Liability Certificate (Final Taking-Over). The Employer after due recommendation by the Engineer shall within 60 days issue or authorize the Engineer to issue on his behalf a Defects Liability Certificate for the whole of the Works. The Defects Liability Certificate shall be a condition precedent to the payment to the Contractor of the second portion of the Retention Money in accordance to the Conditions set out in Sub-Clause 60.6.

Remedies

63.5 Assignment and Subcontracting, Additional Remedies

Add the following new Sub-Clause 63.5:

"Without prejudice to the remedies under Sub-Clause 63.1 or any other Clause in the Contract, if the Contractor assigns or subcontracts the whole or any part of the Works in contravention of Sub-Clauses 3.1 or 4.1 or if a Subcontractor assigns or subcontracts the whole or part of the subcontracts works in contravention of Sub-Clause 4.3(e), the Engineer may, subject to the prior consent of the Employer, take action in respect of either or both of the following:

- (a) instruct the Contractor to dismiss and remove immediately, or within such other time as may be specified in the instruction, the Subcontractor, or the sub-Subcontractor from the Site;
- (b) deduct, as penalty from moneys otherwise due to the Contractor, up to 15% of the value of the works assigned, subcontracted or sub-subcontracted, based on the Contract Price, as estimated by the Engineer.

If there is insufficient money due to the Contractor to cover the deduction referred to in Sub-Clause 63.5 (b), the Employer shall have the right to call on the Contractor's performance security in order to recover the said moneys.

The Contractor shall not be entitled to any extension of time for completion under Sub-Clause 44.1 arising out of any delay caused by the dismissal and removal of the Subcontractor or sub-Subcontractor from the Site."

Special Risks

65.2 Special Risks

Delete Sub-Clause 65.2 (a) and Substitute by the following:

- (a) "The Special Risks are the risk defined under paragraph (a), sub-paragraphs (i) to (v) of Sub-Clause 20.4."

Settlement of Disputes

Delete Sub-Clauses 67.1, 67.2, 67.3, and 67.4 and Substitute with the following:

67.1 Engineer's Decision

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. No later than the eighty-fourth day after the day on which he received such reference the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause.

Unless the Contract has already been repudiated or terminated, the Contractor shall in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same be revised, as hereinafter provided, in a Amicable Settlement or litigation.

If the Employer or the Contractor are dissatisfied with any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the eighty-fourth day after the day on which he received the reference, then either the Employer or the Contractor may commence Amicable Settlement.

67.2 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this contract or the interpretation thereof.

67.3 Jurisdiction

Any dispute between the Parties which cannot be settled amicably, shall be submitted to the courts of proper jurisdiction in the Republic of Lebanon.

Notices

68.2 Notice to Employer and Engineer

For the purposes of this Sub-Clause the respective addresses are:

(a) Employer's address:

As stated in the Appendix to Bid

(b) Engineer's address:

As stated in the Appendix to Bid

Default of Employer

69.1 Default of Employer

Delete Sub-Clause 69.1 (a).

Delete Sub-Clause 69.1 (d).

69.4 Contractor's Entitlement to Suspend the Work

Delete Sub-clause 69.4 and Substitute by the following:

The Contractor may, if the Employer fails to pay the amount due under any certificate of the Engineer within 60 days after the expiry of the time stated in Sub-Clause 60.8 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 60 days prior notice to the Employer, with a copy to the Engineer, reduce the rate of work in a manner that the Contractor shall clearly specify and reflect in a revised programme of work, showing the rate of work to be reduced and intended reduction in resources, fully documented and submitted for the Engineer's verification.

69.5 Resumption of Work

Delete Sub-clause 69.5 and Substitute by the following:

Where the Contractor reduces the rate of work, having given notice in accordance with Sub-Clause 69.4, and the Employer subsequently pays the amount due or part of the amount due in any form of payment, the Contractor shall resume normal working as soon as reasonably possible but in any case not exceeding 30 days from such payment.

Changes in Cost and Legislation

70.1 Increase or Decrease of Cost (Price Adjustment)

Delete Sub-Clause 70.1 and Substitute by the following:

"The amounts payable to the Contractor pursuant to Sub-Clause 60.1, shall be adjustable only in respect of rise or fall in cost for the following items:

	Description	Equation
A	Reinforcement Steel	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * L_{mc1} / L_{mc0} * E_1 / E_0 + 0.15\}$ Applicable to the cost of completed steel reinforcement works
B	Excavation, BackFilling, and Aggregate base & sub-base courses	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.25 * F_1 / F_0 + 0.10 * E_{qp1} / E_{qp0} * E_1 / E_0 + 0.50\}$
C	Concrete Works	$P_1 = P_0 * \{0.45 * C_1 / C_0 + 0.15 * L_1 / L_0 + 0.10 * F_1 / F_0 + 0.30\}$ Applicable to the cost of concrete excluding the steel reinforcement price
D	Industrial Steel, steel beams and Air conditioning Ducts	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * L_{mb1} / L_{mb0} * E_1 / E_0 + 0.15\}$ Applicable to the cost of Industrial Steel, steel beams and Air conditioning Ducts installed including Labor and workmanship.
E	Copper	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * C_{f1} / C_{f0} * E_1 / E_0 + 0.15\}$ Applicable to the cost of copper installed including Labor and workmanship.

	Description	Equation
F -1	Aluminum Works including glass	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.10 * Ver_1 / Ver_0 * E_1 / E_0 + 0.60 * Alu_1 / Alu_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of Aluminum Works including glass installed including Labor and workmanship.
F-2	Aluminum Works excluding glass	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Alu_1 / Alu_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of Aluminum Works excluding glass installed including Labor and workmanship.
G	Ductile Iron Pipes	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Tf_1 / Tf_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of installed pipes
H	Steel Pipes	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Ta_1 / Ta_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of installed pipes
I	Pumps, Air Compressors, Hydraulic systems	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Pu_1 / Pu_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of installed pumps
J	GRP Pipes	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.14 * Rt_1 / Rt_0 * Y_{n1} / Y_{n0} + 0.28 * Gf_1 / Gf_0 * Y_{n1} / Y_{n0} + 0.43\}$ Applicable to the cost of installed pipes
K	Polyethylene Pipes	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Et_1 / Et_0 * Y_{n1} / Y_{n0} + 0.15\}$ Applicable to the cost of installed pipes
L	Bituminous Binder and Wearing Course prime and tack coat	$P_1 = P_0 * \{0.15 + 0.15 * L_1 / L_0 + 0.45 * [(1.12 * B_1 + 66) / (1.12 * B_0 + 66)] + 0.25 * F_1 / F_0\}$ when contract price is in USD
M	Electrical Works related to Buildings and similar	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.55 * Cf_1 / Cf_0 * E_1 / E_0 + 0.15 * Lma_1 / Lma_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of Electrical works completed and not supplied
N	Wood Works	$P_1 = P_0 * \{0.15 * L_1 / L_0 + 0.70 * Bo_1 / Bo_0 * E_1 / E_0 + 0.15\}$ Applicable to the cost of Wood Works installed including Labor and workmanship.

Where:

Alu_0 = “Aluminium Brut” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.

Alu_1 = Weighted Average (Moyenne Pondérée) for “Aluminium Brut” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.

B_0 = Average price for “Bitumine 3.5 Pct” in American \$ as per Platts Bulletin for the Calendar month in which the bid opening took place.

B_1 = Weighted Average (Moyenne Pondérée) for “Bitumine 3.5 Pct” Average Price in American \$ as per Platts Bulletin during the period of executed works included in the monthly statement.

Bo_0 = “BT18a – Menuiserie bois et sa quincaillerie intérieure y compris ” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.

Bo_1 = Weighted Average (Moyenne Pondérée) for “BT18a – Menuiserie bois et sa quincaillerie intérieure y compris” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.

C_0 = Cement (Ciment en Vrac) ton Price as issued by the Cementeries on bid opening day.

- C_1 = Weighted Average (Moyenne Pondérée) for the Cement (Ciment en Vrac) ton Price as issued by the Cementeries during the period of executed works included in the monthly statement.
- Cf_0 = “Fils en cuivre ou alliage” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Cf_1 = Weighted Average (Moyenne Pondérée) for “Fils en cuivre ou alliage” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- E_0 = Closing exchange rate for the Euro vs the contract currency as per the bulletin published by the Central Bank of Lebanon on bid opening date.
- E_1 = Weighted Average (Moyenne Pondérée) closing exchange rate for the Euro vs the contract currency as per the bulletin published by the Central Bank of Lebanon, during the period of executed works included in the monthly statement.
- Eqp_0 = Average for both “Machines agricoles françaises exportées” and “Véhicules utilitaires” Indices as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Eqp_1 = Weighted Average (Moyenne Pondérée) for “Machines agricoles françaises exportées” and “Véhicules utilitaires” Indices as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Et_0 = “Polyethylene (high density)” index as issued by Bank of Japan, Research and Statistics Department for the Calendar month in which the bid opening took place.
- Et_1 = Weighted Average (Moyenne Pondérée) for “Polyethylene (high density)” index as issued by Bank of Japan, Research and Statistics Department during the period of executed works included in the monthly statement.
- F_0 = Gaz Oil (Mazout) Market Price as issued by the Ministry of Industry on bid opening day.
- F_1 = Weighted Average (Moyenne Pondérée) Gaz Oil (Mazout) Market Price as issued by the Ministry of Industry during the period of executed works included in the monthly statement.
- Gf_0 = “Glass fiber and Glass Fiber Products” index as issued by Bank of Japan, Research and Statistics Department for the Calendar month in which the bid opening took place.
- Gf_1 = Weighted Average (Moyenne Pondérée) for “Glass fiber and Glass Fiber Products” index as issued by Bank of Japan, Research and Statistics Department during the period of executed works included in the monthly statement.
- L_0 = Minimum monthly wage excluding any additional benefits i.e transportation, etc..., on bid opening day.
- L_1 = Weighted Average (Moyenne Pondérée) monthly wage excluding any additional benefits i.e transportation, etc ..., for the Calendar month during the period of executed works included in the monthly statement.

- Lma_0 = “Fils en aciers non alliés de qualité” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Lma_1 = Weighted Average (Moyenne Pondérée) for “Fils en aciers non alliés de qualité” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Lmb_0 = “Petites barres rondes en aciers non alliés de qualité” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Lmb_1 = Weighted Average (Moyenne Pondérée) for “Petites barres rondes en aciers non alliés de qualité” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Lmc_0 = “Barres Crénelées ou nervurés pour béton armé” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Lmc_1 = Weighted Average (Moyenne Pondérée) for “Barres Crénelées ou nervurés pour béton armé” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- P_0 = Price as shown in the Original Bill of Quantities
- P_1 = Adopted Price for contractor reimbursement.
- Pu_0 = “Pompes, compresseurs et systèmes hydrauliques exportés” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Pu_1 = Weighted Average (Moyenne Pondérée) for “Pompes, compresseurs et systèmes hydrauliques exportés” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Rt_0 = “Thermosetting resins” index as issued Bank of Japan, Research and Statistics Department for the Calendar month in which the bid opening took place.
- Rt_1 = Weighted Average (Moyenne Pondérée) for “Thermosetting resins” index as issued by Bank of Japan, Research and Statistics Department during the period of executed works included in the monthly statement.
- Ta_0 = “Tubes en acier et accessoires” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Ta_1 = Weighted Average (Moyenne Pondérée) for “Tubes en acier et accessoires” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Tf_0 = “Pièces de fonderie en fonte” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.
- Tf_1 = Weighted Average (Moyenne Pondérée) for “Pièces de fonderie en fonte” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Ver_0 = “Verre et articles en verre” index as issued by the french establishment INSEE for the Calendar month in which the bid opening took place.

- Ver_1 = Weighted Average (Moyenne Pondérée) for “Verre et articles en verre” index as issued by the french establishment INSEE during the period of executed works included in the monthly statement.
- Y_{n0} = Closing exchange rate for the Yen vs the contract currency as per the bulletin published by the Central Bank of Lebanon on bid opening date.
- Y_{n1} = Weighted Average (Moyenne Pondérée) closing exchange rate for the Yen vs the contract currency as per the bulletin published by the Central Bank of Lebanon, during the period of executed works included in the monthly statement.

Construction items listed in the preamble of the BOQ are subject to price adjustment. In case a construction item includes more than one material/trade subject to price adjustment, then this item is subject to adjustment using the corresponding formulas for the major materials and applied to their respective shares in the unit price of this item.

Unit Price adjustment will be calculated up to five decimal places.

The price adjustment formulae shall apply on the monthly payment certificates and the cumulative increases “A” that occurred (or the cumulative decreases “B” that occurred) and shall be calculated on the value of the works in the successive monthly payment certificates, according to the following:

- a) a price adjustment formula shall apply only if the amount of the cumulative increase (or the cumulative decrease) of an adjusted Contract price exceeds **3%** of the original contract amount “C”.
- b) when $A > 0.03C$, indemnities for the increase of prices equivalent to $A - 0.03C$ shall be paid to the Contractor in the successive monthly payment certificates.
- c) when $B > 0.03C$, an amount equivalent to $B - 0.03C$ shall be deducted from the Contractor’s monthly payment certificates, due to the decrease of prices.
- d) the Employer has the right to recover any increase paid to the Contractor if the cumulative increase of an adjusted Contract price falls below 3% of the original contract amount; also the Employer has the obligation to return to the Contractor any deduction already applied on the monthly payment certificates, if the decrease falls below 3% of the original contract amount.

70.2 Subsequent Legislation

Delete Sub-Clause 70.2 and Substitute by the following:

" If, after the day 28 (twenty eight) days prior to the latest date for submission of tenders for the Contract, there occur in Lebanon changes to any Law, Decree or Decision of the Council of Ministers which causes additional or reduced cost to the Contractor, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Contractor and approval of the Employer, be added to or deducted from the Contractor Price.

Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already have taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Sub-Clause 70.1."

Currency and Rates of Exchange

72.2 Currency Proportions

Delete Sub-Clause 72.2.

72.3 Currencies of Payment for Provisional Sums

Delete the words "Sub-Clauses 72.1 and 72.2" from the 4th line and Substitute the words "Sub-Clause 60.4".

72.4 Substantial Changes in Currency Requirements

Add the following new Sub-Clause 72.4:

"The foreign and local currency portions of the balance of the Contract Price if applicable to this contract shall be amended by agreement between the Employer and the Contractor to reflect any substantial changes in the expected foreign and local currency requirements of the Contractor during execution of the works provided that

- (a) the Contractor shall inform the Employer and the Engineer whenever any such substantial change may occur; or
- (b) the Engineer may recommend a review of such expected requirement if in his judgment there is evidence of a change in the country of origin of materials, Plant, or services to be provided under the Contract which should result in any substantial change of such expected requirements."

Additional Clauses Taxes, Duties and Shares

Add the following new Sub-Clauses: 73.1, 73.2, 73.3, 73.4, 74.1, 75.1, 76.1, 77.1, 78.1, 79.1.

73.1 Foreign Taxation

The prices bid by the Contractor shall be deemed to include all taxes, duties and other charges imposed outside the Employer's country on the production, manufacture, sale and transport of the Contractor's Equipment, Plant, materials, and supplies to be used in or furnished under the Contract, and on the services performed under the Contract.

73.2 Local Taxation

The Prices bid by the Contractor shall include all applicable Governmental and Municipal fees, taxes and duties except the VAT that may be levied in accordance with the laws and regulations in force as of the 28 days prior to the latest date set for submission of Bids, in the Republic of Lebanon on the Contractor's Equipment, Plant, materials and supplies (permanent, temporary and consumable) acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in Lebanon in respect of the Contract. VAT shall be applicable separately according to Appendix 2.

73.3 Income Tax on Staff

The Contractor's staff, personnel and labour will be liable to pay personal income taxes in Lebanon in respect of such of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

73.4 Duties on Contractor's Equipment

Notwithstanding the provisions of Sub-Clause 73.2, the Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with customs authorities at the port of entry an approved export bond or bank guarantee, valid until the time completion of the Contract plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and callable in the event that the Contractor's Equipment is not exported from the Employer's country on completion of the Contract. A copy of the bond or guarantee endorsed by the customs authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment and spare parts, or upon completion of the Contract, the Contractor shall prepare, for approval by the customs authorities, an assessment of the residual value of the Contractor's Equipment and spare parts to be exported, based on the depreciation scale(s) and other criteria used by the customs authorities for such purposes under the provisions of the applicable law. Import duties and taxes shall be due and payable to customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the Contractor's Equipment and spare parts to be exported; and (b) on the initial imported value of that Contractor's Equipment and spare parts remaining in the Employer's country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall be called in the full amount remaining.

Miscellaneous

74.1 Illegal Payments

If the Contractor, or any of his Subcontractors, agents or servants gives or offers to give to any person any payment, gift, gratuity or commission as an inducement or reward for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or for showing or forbearing to show favor or disfavor to any person in relation to the Contract or to any other contract with the Employer, then the Employer may enter upon the Site and the Works and expel the Contractor and the provisions of Clause 63 hereof shall apply as if such entry and expulsion has been made pursuant to that Clause.

75.1 Termination of Contract for Employer's Convenience

The Employer shall be entitled to terminate this Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination the Contractor

- (a) shall proceed as provided in Sub-Clause 65.7; and
- (b) shall be paid by the Employer as provided in Sub-Clause 65.8.

76.1 Restrictions on Eligibility

- (a) Any Plant, materials, or services which will be incorporated in or required for the Works, as well as the Contractor's Equipment and other supplies, shall have their origin in any of the countries and territories eligible under the Lebanese Law and the funding agency guidelines.
- (b) For the Purpose of this clause, "origin" means the place where the materials and equipment were mined, grown, produced, or manufactured, or from which the services are provided.
- (c) The origin of Goods and services is distinct from the nationality of the Supplier.

77.1 Joint Venture and Several Liability

If the Contractor is a joint venture of two or more persons all such persons shall be jointly and severally bound to the Employer for the fulfillment of the terms of the Contract and shall designate one person to act as leader with authority to bind the joint venture. The composition or constitution of the joint venture shall not be altered without the consent of the Employer.

78.1 Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purposes of the Contract the same shall be referred to the Employer whose determination shall be final.

79.1 Safety, Health and Environmental Regulations

The Contractor shall comply with the requirements of Safety, Health and Environmental Regulations. The regulations and requirements and specific measures and actions available to the Employer and the Engineer, including suspension of the Works or part of the Works and payment deductions set out in Clause 3 of these Regulations, in the event of non-compliance by the Contractor are included in Appendix 1 to these Conditions of Particular Application.

CONDITIONS OF CONTRACT

B – Landfill Operation

CONDITIONS OF CONTRACT

B – Landfill Operation

PART I - CONDITIONS OF CONTRACT

TABLE OF CONTENTS

	Page
ARTICLE 1: DEFINITIONS.....	4
ARTICLE 2: RULES OF INTERPRETATION.....	7
ARTICLE 3: SCOPE OF AGREEMENT	9
ARTICLE 4: CONSTRUCTION AND OPERATION OF DISPOSAL FACILITY	9
4.1 EMPLOYER’S RESPONSIBILITIES.	9
4.2 CONTRACTOR’S RESPONSIBILITIES AND DEFECTS LIABILITY.	9
4.3 TESTING, COMMISSIONING AND COMMENCEMENT DATE OF OPERATION	10
4.4 LIQUIDATED DAMAGES FOR DELAY OF OPERATION AND	11
ARTICLE 5: EXISTING DISPOSAL EQUIPMENT AND MACHINERY	11
ARTICLE 6: PROVISION OF SERVICES	11
6.1 COMMENCEMENT DATE FOR OPERATION	11
6.2 CONTRACTOR’S RESPONSIBILITIES.	12
6.3 PERSONNEL.	12
6.4 COMPLAINTS IN RESPECT OF SERVICES.	14
6.5 COORDINATION WITH MUNICIPALITIES.	14
6.6 SUBCONTRACTORS AND SUBCONTRACTS.	14
ARTICLE 7: PERMITS, LAWS AND LEGAL REQUIREMENTS	14
ARTICLE 8: SERVICE AREA	15
8.1 SERVICE AREA	15
8.2 SITE.	15
ARTICLE 9: EMPLOYER’S MONITORING RIGHTS: REPORTS, RECORDS AND AUDIT	15
9.1 EMPLOYER’S MONITORING RIGHTS.	15
9.2 REPORTS.	16
9.3 BOOKS AND RECORDS, AUDIT.	16
9.4 REFRAINMENT OF THE CONTRACTOR FROM PROVISION OF INFORMATION	16
ARTICLE 10: SERVICE PAYMENT	17
10.1 DISPOSAL SERVICE PAYMENT.	17
ARTICLE 11: FAILURE TO PERFORM.....	17
11.1 GENERAL.	17
11.2 PENALTIES FOR FAILURE TO PERFORM.....	18
ARTICLE 12: INVOICING AND PAYMENTS	18
12.1 INVOICING.....	18
12.2 PAYMENTS.	18

ARTICLE 13: TAXES	19
ARTICLE 14: INSURANCE.....	19
14.1 MINIMUM INSURANCE REQUIREMENTS	19
14.2 INSURANCE CERTIFICATES.	20
14.3 NOTIFICATION OF INSURANCE CLAIMS.	20
14.4 APPLICATION OF PROCEEDS.	20
ARTICLE 15: INCREASED COST OR SAVINGS.....	20
15.1 CLAIMS.	20
15.2 PROCEDURE.....	21
ARTICLE 16: FORCE MAJEURE	21
16.1 FORCE MAJEURE EVENT.	21
16.2 RESPONSIBILITIES OF THE PARTIES DURING FORCE MAJEURE EVENTS.....	22
16.3 CONSEQUENCES OF FORCE MAJEURE EVENTS.	22
ARTICLE 17: TERM AND TERMINATION.....	23
17.1 TERM OF THE AGREEMENT.	23
17.2 NOT USED.....	23
17.3 TERMINATION UPON CONTRACTOR’S AND THE EMPLOYER’S EVENT OF DEFAULT.	23
17.4 THE EMPLOYER EVENT OF DEFAULT.	24
17.5 CONTRACTOR EVENT OF DEFAULT.	24
17.6 TERMINATION UPON CONTRACTOR’S CORRUPTIVE BEHAVIOR.....	25
17.7 TERMINATION UPON FAILURE TO PERFORM.	25
17.8 TERMINATION UPON PROLONGED FORCE MAJEURE EVENT.....	26
ARTICLE 18: TRANSFER AT THE END OF CONTRACT PERIOD	26
18.1 TRANSFER PROGRAM FOR DISPOSAL FACILITY’S OPERATIONAL UNITS	26
18.2 CONDITION OF DISPOSAL FACILITY’S OPERATIONAL UNITS AND WARRANTIES.	26
ARTICLE 19: INDEMNIFICATION.....	26
19.1 INDEMNIFICATION BY CONTRACTOR.....	26
19.2 FINAL DETERMINATION.	27
19.3 PROCEDURES.	27
ARTICLE 20: GOVERNING LAW AND DISPUTE RESOLUTION.....	28
20.1 GOVERNING LAW.	28
20.2 NEGOTIATIONS.	28
20.3 DISPUTES.	28
ARTICLE 21: MISCELLANEOUS.....	28
21.1 NOTICES.....	28
21.2 ENTIRE AGREEMENT.	29
21.3 WAIVER.	29
21.4 CUSTOMS DUTIES.	29
21.5 AMENDMENT.....	29
21.6 NO THIRD-PARTY BENEFICIARY.	29
21.7 ASSIGNMENT, LIENS.	29
21.8 INVALIDITY.	30
21.9 CONFIDENTIALITY.	30
21.10 LANGUAGE.....	30
21.11 BINDING EFFECT.....	30
21.12 PUBLICITY.....	30
21.13 EXPENSES.....	30

APPENDIX A - SERVICE AREA AND LANDFILL SITE31

**APPENDIX B - DESCRIPTION OF HAULING EQUIPMENT, LANDFILLING MACHINERY
AND DISPOSAL FACILITY32**

APPENDIX C - IMPLEMENTATION SCHEDULE.....33

APPENDIX D - CALCULATION OF SERVICE PAYMENT34

ARTICLE 1:

DEFINITIONS

For the purposes of the General Conditions of Contract related to Landfilling Operation, the following capitalized words, terms and phrases used in these Conditions, including in the appendices, schedules and attachments hereto, shall have the meanings set forth in this ARTICLE 1:.

“Agreement Term” or **“Term”** is, as defined in Article 17.1,

“Agreement or Operation Service Agreement” means this Disposal Service Agreement, as may be amended from time to time in accordance with the terms and conditions hereof (Bill No. 6 - Landfilling Operation).

“Billing Period” means monthly period that starts at the commencement date of each operating month until the last day of the same operating month. If this Agreement is terminated earlier in accordance with the terms hereof, it will be from the first day of the operating month in which this Agreement is terminated until the day of termination.

“Business Day” means any day excluding Saturday, Sunday and any day that is in the Republic of Lebanon a legal holiday or a day on which banking institutions are authorized or required by law or other governmental action to be closed.

“Change in Law” means any of the following events as a result of any action by any Governmental Instrumentality: (i) a change in or repeal of an existing Legal Requirement; (ii) an enactment or making of any new Legal Requirement; and (iii) a change having the force of Law in the application or interpretation of a Legal Requirement.

“Claim” means with respect to any Party, any and all suits, sanctions, legal proceedings, claims, assessments, judgments, damages, penalties, fines, liabilities, demands, costs, expenses of whatever kind (including legal fees on a solicitor and own client basis and losses incurred or sustained by or against such Party (but excluding any lost profits or other special, incidental, indirect, punitive or consequential damages as referred to in Article 20.5).

“Commencement Date” means, subject to Article 4.3 (b) and as defined in Article 6.1, the Commencement Date of Operation Services which shall start at the latest Four (4) months, from the Signing Date/Notification Date of the Contract.

“Contractor Representative” is defined in Article 6.3 (a).

“Contractor’s Premises” means any land, facility, building, or structure, or portion thereof owned, leased or otherwise used for the purposes of implementing this Agreement and performing the Services under this Agreement.

“Customs Duties” means any Taxes payable on any equipment or materials imported by or on behalf of the Contractor into the Republic of Lebanon for purposes of this Agreement.

“Hauling Equipment” means, collectively, all hauling (waste transportation to the landfill from the Sorting Facility designated by the Employer) related vehicles, Containers, equipment, materials, consumables and any other equipment required or necessary to perform the Landfilling Services as described in Appendix B (Description of Hauling Equipment, Landfilling Machinery and Disposal Facility) of the General Conditions of Contract.

“Disposal Facility” means, the Disposal Facility subject of this Tender, including the landfill cells and operation units (leachate collection and treatment systems and gas collection and management systems), as described in Appendix B (Description of Hauling Equipment, Landfill Machinery, and Disposal Facility, as provided by the Contractor), hereof, operated for the sound and safe disposal of MSW including treatment of leachate and gas.

“Employer’s Representative” means the authorized entity to act on behalf of the Employer in respect to supervision services pertaining to this Agreement.

“Force Majeure Event” is defined in Article 16.1.

“Good Industry Practice” means any relevant practices, methods and acts generally accepted by the international solid waste management industry that, at that particular time, in the exercise of reasonable judgment in the light of the facts known or that reasonably should have been known at the time a decision is made, would be expected to accomplish the desired result in a manner consistent with applicable Laws and Legal Requirements. “Good Industry Practice” includes taking reasonable steps to ensure that:

- (a) adequate materials, resources and supplies, including energy, are available to meet the Hauling Equipment, Landfilling Machinery and Disposal Facility’s needs under normal conditions and reasonably anticipated abnormal conditions;
- (b) sufficient operating personnel are available and are adequately experienced and trained to operate the Disposal Facility properly, efficiently and taking into account manufacturer's guidelines and specifications and are capable of responding to abnormal conditions;
- (c) preventative, routine and non-routine maintenance and repairs are performed on a basis that ensures reliable long-term and safe operation and taking into account manufacturer's recommendations and are performed by knowledgeable, trained and experienced personnel who are utilizing proper equipment, tools and procedures;
- (d) appropriate monitoring and testing is done to ensure that equipment is functioning as designed and to provide assurance that equipment will function properly under both normal and abnormal conditions; and
- (e) Equipment is operated in a manner safe to workers, the general public, the environment, plant and equipment and with regard to defined limitations, such as climatic conditions.

“Government” means the Government of the Republic of Lebanon.

“Governmental Authorizations” means all authorizations, consents, decrees, permits, waivers, privileges, approvals from and filings with any Governmental Instrumentality necessary for the implementation and operation of the Services under this Agreement.

“Governmental Instrumentality” means (i) the Government, or any ministry, department or political subdivision thereof, and (ii) (A) any court or tribunal or (B) any other governmental entity, instrumentality, agency, authority, corporation, committee or commission, under the direct control of the Government, or any ministry, department or political subdivision thereof exercising executive, legislative, regulatory or administrative functions of the Government and having jurisdiction under the laws of the Republic of

Lebanon over the Contractor, or any independent regulatory authority, in each case within the Republic of Lebanon.

“Implementation Schedule” means the schedule for the implementation of the Disposal Service Agreement prepared by the Contractor in accordance with Appendix C.

“Late Payment Rate” means a simple annual interest rate equal to LIBOR plus two per cent (2%).

“Law” means any decree, or law, issued or promulgated by a Governmental Instrumentality having jurisdiction over the matter in question.

“Lebanese Pound” or **“LBP”** means the lawful currency of the Republic of Lebanon.

“Legal Requirements” means all Laws and Governmental Authorizations and any injunction or final non-appealable judgment directly applicable to the relevant Party of any Governmental Instrumentality having jurisdiction over the matter in question.

“Lien” means any mortgage, pledge, lien, security interest, option agreement, claim, charge or encumbrance of any kind.

“Loss” means, subject to Article 20.5, any loss, claim, action, liability, damage, cost, charge, expense, diminution in value or deficiency of any kind or character that any Party pays, suffers or incurs or is liable for, including:

- (a) all interest and other amounts payable to third parties; and
- (b) all legal and other expenses incurred in connection with investigating or defending any claim or action, whether or not resulting in any liability and all amounts paid in settlement of claim or action.

“Mobilization Period and Construction of Landfill Cells” means, subject to Article 4.2 (c) and Article 4.3 (b), the period that starts at the Signing Date / Notification Date and extends to the Commencement Date of the Operation. This Period should be as specified in sub-clause 43.1 of the Appendix to Bid.

“Monthly Service Payment” is defined in Article 10.1

“MSW Producers” include all Municipal Solid Waste producers, regardless of whether they are households, institutions, commercial establishments, markets or industries-

“Municipal Solid Waste” or **“MSW”** means all solid wastes produced by the MSW Producers comprising residential waste; commercial and institutional waste; bulky waste; green waste; market waste; small quantities of demolition debris; problematic waste; waste discharged of in litter bins; street-sweeping waste; and litter. Municipal Solid Waste shall not include agricultural waste; sewage sludge; old and abandoned cars; slaughterhouse waste; infectious and hazardous medical waste; construction and demolition waste; industrial hazardous waste; radioactive waste; and explosives.

“Notice of Failure to Perform” as defined in Article 11.1

“Parties” means, collectively, Contractor and Employer, and **“Party”** means either of them.

“Performance Security of Operation” means, subject to Article 4.2, a security bond that guarantees compensation to the Employer in the event that it must assume the obligations and/or duties of the Contractor in order to continue the responsibilities of the Contractor as defined by this Agreement. The Performance Security of Operation shall be substantially in the form set forth under the Contractual Forms of this Tender Document.

“Performance Failure Point” as defined in Article 11.1

“Performance Penalties” are defined in ARTICLE 11:.2.

“Rectification Notice” is defined in Article 11.1.

“Scheduled Commencement Date” means, as defined in Article 9.1, the date stipulated in Appendix C (Implementation Schedule) for the scheduled achievement of the Commencement Date, as may be extended from time to time in accordance with the provisions of this Agreement.

“Service Area” means the area for which the Disposal Services are to be performed by the Contractor in accordance with the terms and conditions of this Agreement and as further described in Appendix A (Service Area and Sanitary Landfill Site).

“Services” is defined in Article 6.3 (a).

“Signing Date / Notification Date” means the date of this Agreement as first written above.

“Site” means, collectively, those parcels of land areas as described in Appendix A (Service Area and Sanitary Landfill Site) of this Agreement which shall be secured and provided by the Employer for the Disposal Facility, in order to perform the Disposal Services, and in accordance with the requirements of this Agreement.

“Supplementary Notice of Failure to Perform” is defined in Article 11.1 hereof.

“Taxes” means any tax, charge, impost, tariff, duty or fee of any kind charged, imposed or levied, directly or indirectly, by any Governmental Instrumentality, including any Municipal Fees or Taxes, value-added tax, sales tax, stamp duty, import duty, withholding tax (whether on income, dividends, interest payments, fees, equipment rentals or otherwise), tax on foreign currency loans or foreign exchange transactions, excise tax, property tax, registration fee or license, environmental, energy or fuel tax, including any interest, penalties or other additions thereon.

“Transfer Date” is as defined in Article 5 or ARTICLE 18:.

“US Dollars” or **“US\$”** means the lawful currency of the United States of America.

ARTICLE 2:

RULES OF INTERPRETATION

Unless the context of this Agreement otherwise requires:

- (a) words of any gender include each other gender;

- (b) words using the singular or plural number also include the plural or singular number, respectively;
- (c) the terms “herein,” “hereby,” “hereto” and similar words refer to this entire Agreement and not to any particular Article, Section, Clause, Exhibit, Appendix or Schedule or any other subdivision of this Agreement;
- (d) references to “Article,” “Section,” “Clause,” “Exhibit,” “Appendix” or “Schedule” are to the Articles, Sections, Clauses, Exhibits, Appendices and Schedules, respectively, of this Agreement;
- (e) the words “include” or “including” shall be deemed to be followed by “without limitation” or “but not limited to” whether or not they are followed by such phrases or words of like import;
- (f) references to “this Agreement” or any other agreement or document shall be construed as a reference to such agreement or document as amended, modified or supplemented and in effect from time to time and shall include a reference to any document which amends, modifies or supplements it, or is entered into, made or given pursuant to or in accordance with its terms;
- (g) whenever this Agreement refers to a number of days, such number shall refer to calendar days unless Business Days are specified;
- (h) all periods of time shall be based on, and computed according to, the Gregorian calendar;
- (i) any capitalized words, terms, phrases and abbreviations used specifically in any Appendix or any Attachment to any Appendix shall have the meanings set forth in such Appendix or Attachment, as the case may be;
- (j) in the event of any inconsistency between any capitalized word, term, phrase or abbreviation set forth in ARTICLE 1: and any capitalized word, term, phrase or abbreviation set forth in any Appendix or any Attachment to any Appendix, the meaning set forth in such Appendix or Attachment shall take precedence over the meaning set forth in ARTICLE 1: unless the context of this Agreement otherwise requires;
- (k) all correspondence, documentation and discussion with respect to the Agreement and the Services shall be in the English language;
- (l) all instructions, notifications, agreements, authorizations, approvals and acknowledgements shall be in writing, which may be by facsimile transfer. Any facsimile transfer shall be confirmed forthwith by dispatch of the original correspondence in letter form;
- (m) no amendment of this Agreement, by variation, deletion or addition, shall be valid unless it is in writing and duly signed by the Employer and the Contractor, at which time it shall be part of this Agreement. Where there is any inconsistency between any written or oral instructions and this Agreement, this Agreement and its officially signed amendments shall prevail; and
- (n) no review, approval or acknowledgement by the Employer shall relieve the Contractor from any liability or obligation under the Agreement.

ARTICLE 3:

SCOPE OF AGREEMENT

The purpose of this Agreement is the provision of Municipal Solid Waste Landfilling Services by the Contractor to the Employer in consideration of the payment by the Employer to the Contractor of the applicable Monthly Service Payment. Toward this end, the Contractor shall be responsible in accordance with the terms and conditions of this Agreement for:

- (a) the construction, erection, installation, permitting, testing and commissioning, insurance, operation, and maintenance of the Disposal Facility described in Appendix B (Description of Hauling Equipment, Landfill Machinery, and Disposal Facility),
- (b) the transfer – transportation of waste rejects, in bales or in bulk, from the designated Sorting Facilities to the Disposal Facility for landfilling purposes,
- (c) the provision to the Employer from and after the Commencement Date of the Landfilling Services specified in Part II (Specifications of Disposal Services) of B - Conditions of Contract - Landfill Operation, and
- (d) the transfer to the Employer, on the last day of the Agreement term, of the Disposal Facility.

ARTICLE 4:

CONSTRUCTION AND OPERATION OF DISPOSAL FACILITY

4.1 EMPLOYER'S RESPONSIBILITIES.

In addition to its obligations hereunder, the Employer shall cause and be responsible for making the Site as described in Appendix (A), available to the Contractor, prior to the Commencement Date.

4.2 CONTRACTOR'S RESPONSIBILITIES AND DEFECTS LIABILITY.

(a) In addition to its other obligations hereunder, the Contractor shall cause and be responsible for delivering to the Employer 15 days before the Commencement of the Operation Services a **Performance Security for Landfilling Operation** in a form of a bank guarantee issued by a Lebanese bank amounting to 10% of the amount for **Landfilling Operation** shown in the Bill of Quantities (Volume 3).

This **Performance Security of Operation** shall be valid until twenty eight (28) days after the issue of the Defects Liability Certificate for **Operation Services**.

The **Defects Liability Period** is 12 months following the closure of the sanitary landfill. The Performance Security shall be submitted in the form set forth in the Contractual Forms of this Tender Document.

(b) The Contractor shall also procure, supply, and transport to the relevant Site, construct, erect, install, permit, test, commission, operate, maintain and close the Disposal Facility, as described in Appendix B (Description of Hauling Equipment, Landfilling Machinery, and Disposal Facility), and in accordance with this Agreement.

(c) The Contractor shall achieve the timely completion of its obligations under this Article 4.2 (b) in accordance with the Implementation Schedule and shall promptly inform the Employer of any material deviations from any dates stipulated in the Implementation Schedule, noting that the Landfill Operation Works shall not exceed the period specified in sub-clause 43.1 of the Appendix to Bid.

(d) The Contractor shall at all times operate and maintain the Disposal Facility and all related equipment in a manner consistent with all applicable Legal Requirements and Good Industry Practice. The Contractor shall also employ at the Disposal Facility all safety devices and safety practices required by all applicable Legal Requirements, the requirements of all insurance policies and Good Industry Practice. To the extent consistent with such requirements, the Contractor shall keep accurate records of any accident or other occurrence at the Disposal Facility that result in injury to persons or damage to property, and shall provide to the Employer reasonable access to these records.

(e) The Contractor shall obtain and retain at the Disposal Facility Site or the Contractor's administrative offices:

(i) for all items of equipment incorporated into the Disposal Facility and described in Appendix B (Description of Hauling Equipment, Landfill Machinery, and Disposal Facility), copies of all operation and maintenance manuals and other technical documentation (including electronic files) for such equipment;

(ii) copies of all test results for tests performed on the Disposal Facility and all items of equipment and machinery incorporated into the Disposal Facility, to the extent that such items are normally retained in accordance with Good Industry Practice;

(iii) as-built drawings for the Disposal Facility, including the civil works; and

(iv) all detailed technical documentation (including electronic files) related to the construction, operation and maintenance of the Disposal Facility, to the extent that such items are normally retained in accordance with Good Industry Practice.

Upon transfer of all or any part of the Disposal Facility to the Employer, all of the foregoing documentation and any other technical documentation and information (including electronic files) in the possession of the Contractor pertaining to the Disposal Facility, or such part thereof, shall be delivered to the Employer on or not later than fifteen (15) days after the date of such transfer, as per Article 18.

4.3 TESTING, COMMISSIONING AND COMMENCEMENT DATE OF OPERATION

(a) The Contractor shall be responsible for the test procedures to be applied during the construction, start-up and commissioning of the Disposal Facility and shall notify the Employer in advance of any changes to such test procedures and the commencement of any such testing. The Employer and/or its designees shall be entitled to be present at any tests conducted during the construction, start-up and commissioning of the Disposal Facility.

(b) The Commencement Date of the Operation Services shall occur on the date jointly certified by the Contractor and the Employer as the date on which the performance of the Disposal Facility during testing demonstrates that the relevant Equipment, Machinery, and

Landfill Basal Liner have attained the criteria for commercial operations and are capable of operating in accordance with the terms and conditions of this Agreement.

4.4 LIQUIDATED DAMAGES FOR DELAY OF OPERATION AND

(a) The Contractor acknowledges that the Employer will suffer actual damages if, due to causes attributable to the Contractor, the Contractor fails to achieve the Commencement Date of Operation by the Scheduled Commencement Date of Operation. In the event of such a delay, the Contractor shall pay liquidated damages to the Employer for each day of delay from the Scheduled Commencement Date until the actual Commencement Date of Operation as stipulated in the Appendix to Bid, Sub-Clause 47.1

(b) In addition, the Contractor acknowledges that the Employer will suffer actual damages if, due to causes attributable to the Contractor, the Contractor fails to evacuate all the waste reject quantities (rejects) from the designated Sorting Plant to the Disposal Facility (Sanitary Landfill) for landfilling. In such an event, the Contractor shall pay liquidated damages to the Employer as stipulated in the Appendix to Bid, Sub-Clause 47.1

(c) Any such payments of liquidated damages shall be made by the Contractor to the Employer, monthly in arrears. If the Contractor fails to pay such liquidated damages when due, the Employer shall be entitled to payment under the Performance Security, substantially in the form set forth in the Contractual Forms of this Tender Document (Form of Performance Security), of such amounts, plus interest at the Late Payment Rate from the date due until the date of payment. To the extent that the Contractor's liability for such liquidated damages exceeds the amount of the Performance Security, the Contractor shall remain obligated to make direct payments thereof to the Employer.

ARTICLE 5: EXISTING DISPOSAL EQUIPMENT AND MACHINERY

The Contractor will have access to the following Disposal Equipment and Machinery existing on Site. Access shall be coordinated with Employer and Contractor present on Site:

- (a) the weighing bridge
- (b) the workshop hangar
- (c) connection to leachate collection network
- (d) connection to gaz flare plant

ARTICLE 6: PROVISION OF SERVICES

6.1 COMMENCEMENT DATE FOR OPERATION

The Commencement Date of Operation shall occur within the period specified in sub-clause 43.1 of the Appendix to Bid, following the commencement of construction works and specifically on the day following the acceptance of the construction works as ready to allow landfilling to start under good conditions, provided that the construction works of the Hauling Equipment, Landfilling Machinery and Disposal Facility, as listed in Appendix B (Description

of Hauling Equipment, Landfill Machinery, and Disposal Facility) are ready as per Article (4.3).

6.2 CONTRACTOR'S RESPONSIBILITIES.

(a) The Contractor shall be responsible, from and after the Commencement Date, for the provision of the Services specified in Part II (Particular Conditions - Specifications of Services) of this Agreement in a proper, skillful and workmanlike manner and to the entire satisfaction of the Employer.

(b) In the event of the Contractor failing to meet this provision at any time during the Agreement Term, the Contractor shall be responsible to immediately rectify the deficient Services at its own cost.

(c) In the event of the Contractor being unable to perform the Services or any part thereof, the Contractor shall immediately inform the Employer giving details of the circumstances, reasons and likely duration and action taken to rectify the situation. Nothing in this provision shall in any way alter, modify, relieve or in any way vary the Contractor's obligation to provide the Services.

(d) The Contractor shall be responsible at all times for scheduling and controlling the Services in accordance with the terms and conditions of the Agreement.

(e) The Contractor shall immediately inform the Employer of, and confirm in writing, any incidents or occurrences, which may prevent or hinder the Contractor from complying with the Agreement or which might affect the interests or other operations of the Employer, or others, including, but not limited to, accidents, stoppages of Services, industrial disputes and any occurrences that may affect the provision of the Services in full compliance with this Agreement. The provision of information under this provision shall not in any way release or excuse the Contractor from any of its obligations under the Agreement.

(f) The Contractor shall provide and maintain a site office and shall notify the Employer about it. The Contractor's office shall be staffed by the Contractor with competent and responsible persons. It shall be equipped with adequate modern communications (telephone, fax machine, e-mail, etc.) and shall be open during all operation hours of the Contractor. One telephone/fax line shall be provided by the Contractor to be used primarily for communication between the Contractor and the Employer.

(g) The Contractor shall be responsible for the security of the Disposal Facility and Site used by the Contractor in connection with the provision of the Services, and the Employer shall be under no liability in respect thereof.

6.3 PERSONNEL.

(a) The Contractor shall appoint a competent and duly authorized person (the "Contractor Representative") who shall be authorized to act on its behalf with respect to operational matters under this Agreement and who shall be readily available to meet with the Employer at all reasonable times during which the Services are provided.

(b) The Contractor shall employ, throughout the Agreement Term, personnel with the necessary experience and capability to efficiently and expeditiously perform the Services, including a sufficient number of competent supervisors and other staff.

If in the opinion of the Employer there is any inadequacy in the number or competence of persons charged by the Contractor with performing the Services, then the Contractor shall on request, at no extra cost to the Employer, provide additional or alternative competent persons.

(c) The Contractor shall ensure that all personnel employed for the purposes of performing the Services under the Agreement are at all times properly and sufficiently qualified, trained, competent, careful, skilled, honest, experienced, instructed and supervised, as the case may be, with regard to the Services and in particular:

- (i) the task or tasks such person has to perform;
- (ii) all relevant provisions of the Agreement;
- (iii) all relevant policies, rules, procedures and standards of the Employer;
- (iv) all relevant rules, procedures and statutory requirements concerning health and safety at work;
- (v) fire risks and fire precautions;
- (vi) the need to maintain the highest standards of hygiene, courtesy and consideration; and
- (vii) the need to recognize situations which may involve any actual or potential danger of personal injury to any person at any location and, where possible, without personal risk, to make safe such situations, and forthwith to report such situations to the Employer.

(d) The Contractor shall provide a sufficient number of supervisors to ensure that the Contractor's personnel engaged in the provision of the Services are at all times adequately supervised and properly perform their duties in accordance with this Agreement. All supervisory personnel of the Contractor shall be able to communicate fluently in the language of the personnel they are supervising.

(e) The Contractor shall make its own arrangements for the engagement of personnel, local or otherwise, and save in so far as the Agreement otherwise provides, for their transport, housing, maintenance, payment, board and lodging.

(f) The Contractor shall at its own cost forthwith replace any of its employees whom the Employer, in its sole discretion, considers to be incompetent, to have acted in a manner prejudicial to the Employer's best interests, to have failed to comply with the Employer's safety or other rules or regulations, to have produced substandard work or whom the Employer, in its sole discretion, wishes to be replaced for any other good reason. The Employer shall not exercise this right frivolously or vexatiously.

(g) The Contractor shall ensure that all of its employees engaged in the Agreement comply with all relevant immigration laws and where required are in possession of a valid work permit and appropriate vaccination certificates during the Agreement Term. Details of such work permits are, if the Employer so requests, to be submitted to the Employer prior to the person being engaged for the Services.

(i) The Contractor shall maintain current, accurate and adequate records of all employees who are or who are to be engaged in connection with the provision of the Services. These records shall be kept at the appropriate location, shall include employee attendances and shall differentiate between those engaged as operatives and those exercising supervision. These

records shall be open for inspection by the Employer at all reasonable times, and a copy of these records shall be provided to the Employer if so requested.

6.4 COMPLAINTS IN RESPECT OF SERVICES.

(a) The Contractor shall deal with any complaints received from whatever source in a prompt, courteous and efficient manner, and in accordance with the Agreement.

(b) For the reception of such complaints as well as public information, the Contractor shall install and operate a call center.

(c) The Contractor shall keep a written record of all complaints received (complaint log) and of the action taken in relation to such complaints. Such records shall be kept available for inspection by the Employer at all reasonable times. The Contractor shall notify the Employer forthwith in writing within 24 hours of all complaints received and of all steps taken in response thereto.

6.5 COORDINATION WITH MUNICIPALITIES.

The Contractor shall use its best efforts to coordinate the Services to be performed under this Agreement with the relevant Municipalities.

6.6 SUBCONTRACTORS AND SUBCONTRACTS.

The Contractor shall not subcontract any part of the Works related to Landfilling Operation (Bill No. 6 of this Project).

ARTICLE 7:

PERMITS, LAWS AND LEGAL REQUIREMENTS

(a) The Contractor shall abide by and comply with all applicable Laws and Legal Requirements.

(b) The Contractor shall obtain all necessary licenses and permits, as well as all temporary permits, authorizations, and work permits required for the implementation of this Agreement and the performance of the Services under this Agreement by any applicable Laws and Legal Requirements.

(c) All costs incurred as a result of complying with applicable Laws, Legal Requirements and of obtaining approvals, licenses, permits for the implementation of this Agreement and the performance of the Services under this Agreement shall be at the expense of the Contractor.

The Contractor shall, at its own cost and expense, obtain and maintain in full and effect all Governmental Authorizations and all other necessary licenses, authorizations and permits required for the performance of the Services in accordance with this Agreement. The Contractor shall ensure that the Disposal Facility are constructed and operated in full anticipation of all Government Authorizations and in full anticipation of the time required to obtain such Government Authorizations under normal circumstances relevant in Lebanon.

(d) All operations necessary for the performance of the Services under this Agreement shall be carried on so far as compliance with the requirements of the Agreement permits so as not to interfere unnecessarily or improperly with the convenience of the public or

the access to, public or private roads and footpaths to or of properties. The Contractor hereby indemnifies the Employer against all claims, demands, proceedings, damages costs, charges and expenses whatever arising in relation to any of the aforesaid matters in so far as the Contractor is responsible for such interference.

ARTICLE 8:

SERVICE AREA

8.1 SERVICE AREA

The geographical area for which the Services under this Agreement shall be performed by the Contractor is described in Appendix A (Service Area and Sanitary Landfill Site) hereof.

8.2 SITE.

(a) The Contractor shall make use of the Site in accordance with the provisions and conditions set out in this Agreement.

(b) The Contractor shall at all times make use of the Site strictly in accordance with all Laws and Legal Requirements and maintain a safe, sanitary and environmentally sound Disposal Facility at each Site, and shall at all times maintain in force all necessary permits and licences.

(d) The Contractor shall undertake construction activities on the Site strictly in accordance with this Agreement.

(e) The Contractor binds itself to rectifying to the full satisfaction of the Employer any environmental or other damages beyond those permitted by this Agreement, Laws and Legal Requirements caused at any time by the construction and/or operation of the Disposal Facility.

(f) The Contractor shall be liable for contamination of seawater, groundwater and existing soil caused by the landfill and landfilling operations and activities.

(g) Subject to the previous provision, the Contractor hereby binds itself to indemnify and hold harmless the Employer from all claims, demands and/or actions, legal and/or equitable, including reasonable legal fees and all other costs of defence arising from the Contractor's use of the Sites in accordance with this Agreement.

ARTICLE 9:

EMPLOYER'S MONITORING RIGHTS: REPORTS, RECORDS AND AUDIT

9.1 EMPLOYER'S MONITORING RIGHTS.

(a) The Employer shall have the right to (i) monitor the Construction and Operation of the Disposal Facility as set forth in ARTICLE 4: (CONSTRUCTION AND OPERATION OF DISPOSAL FACILITY) and Appendix C (Implementation Schedule), and (ii) the performance of the Services as set forth in ARTICLE 6: (PROVISION OF SERVICES) in accordance with this Agreement. For the purpose of this provision, the Employer shall have

the right to review and make copies as reasonably requested, of all materials required to be obtained and retained by the Contractor and all materials pertinent to the exercise of the Employer's audit rights pursuant to Article 9.3.

The purpose of such monitoring and review shall be to determine, whether the Disposal Facility are being manufactured, supplied, procured, erected, constructed, installed, tested and commissioned in accordance with Appendix B (Description of Hauling Equipment, Landfill Machinery, and Disposal Facility), and, in the case of the Services, to inspect and determine whether the Services are being provided in accordance with the terms of this Agreement.

(b) The Contractor shall permit the Employer or Employer's Representative to conduct such monitoring and review at the Contractor's Premises during service hours upon reasonable notice to the Contractor. Such monitoring and review shall be conducted in the presence of and, in the case of inquiries addressed to Contractor's employees, through the Contractor's Representative. In the case of monitoring any of the Contractor's equipment used for the performance of the Services outside the Contractor's Premises and the Services, the Employer shall have the right to conduct such monitoring without prior approval of the Contractor and without the presence of the Contractor's Representative, at any time and at the Disposal Facility / Site within the Service Area.

9.2 REPORTS.

The Contractor shall provide regular reports to the Employer as specified in Part 2 (Specifications of Services) of this Agreement.

9.3 BOOKS AND RECORDS, AUDIT.

(a) The Contractor shall comply with the relevant accounting principles and standards and maintain proper books and records in accordance with all Legal Requirements.

The Employer and Employer's Representative may at reasonable times, and at its own expense, conduct audits of the Contractor's books, data and records pertaining to this Agreement, including, but not limited to, service and equipment logs and records, and any documents, data and information that may be requested by the Employer for the purpose of determining whether the Monthly Service Payments charged to the Employer have been computed in accordance with the provisions of this Agreement. Any disputes with respect to any such charges shall be resolved in accordance with Article 12.2.

(b) All Contractor books, data and records referred to in this Article shall be maintained by the Contractor for a minimum of sixty (60) months after the creation of such record or data and for any additional length of time required by regulatory agencies with jurisdiction over the Parties. Upon expiration of such sixty (60) month period, the Contractor shall neither dispose of nor destroy any such records or data without giving thirty (30) days prior written notice to the Employer. The Employer, upon receiving such notice, may take possession of such books, records or data in lieu of such disposal or destruction by giving the Contractor notice of its intention to receive such books, records or data at its cost at least ten (10) days prior to the expiration of the thirty (30) day period.

9.4 REFRAINMENT OF THE CONTRACTOR FROM PROVISION OF INFORMATION

In case the Contractor refrains from providing the Employer with any information as per above Clauses 9.1 through 9.3, the Employer reserves the right to withhold a percentage of 10% from each Monthly Service Payment until information are provided.

ARTICLE 10:

SERVICE PAYMENT

10.1 DISPOSAL SERVICE PAYMENT.

Subject to the terms and conditions of this Agreement, and except as provided in Article 16.3 (Consequences of Force Majeure Events.), during the period from the Commencement Date of Operation up to and including the last day of the Agreement, the Employer shall pay the Contractor in consideration for the performance of the Services the Monthly Service Payment, subject to and on the terms and conditions described in Appendix D (Calculation of Service Payment).

ARTICLE 11:

FAILURE TO PERFORM

11.1 GENERAL.

(a) At any time on and after the Commencement Date, the Employer may investigate each case or complaint related to the Contractor's provision of Services in accordance with the Agreement. If the Employer determines, based on Employer Representative assessment, that in any particular case the Contractor has failed to perform the Services completely in accordance with the provisions of the Agreement, it shall be entitled to issue to the Contractor a notice instructing the Contractor to rectify the failure ("**Rectification Notice**") in accordance with Section (d) of this Article. In addition, where the Service which has not been performed in accordance with the provisions of the Agreement is in the opinion of the Employer of such nature that the issuing of a Rectification Notice would be inappropriate and/or of no effect, the Employer shall be entitled to issue a Notice of Failure to Perform.

(b) If the Contractor fails to rectify the deficiency in Services subject of a Rectification Notice, the Employer shall be entitled to issue a Notice of Failure to Perform. Further failure on the part of the Contractor to remedy the Service deficiency may result in the issuing of a Supplementary Notice of Failure to Perform. Each Notice of Failure to Perform and Supplementary Notice of Failure to Perform will require the Contractor to remedy the Service deficiency in accordance with Section (d) of this Article.

(c) Without prejudice to the generality of the foregoing, the specific matters defined in Part II of B. Operation (Particular Conditions - Specifications of Services) shall be included in the types of the Service deficiencies for which notices may be issued.

(d) Each time period during which the Contractor is to remedy deficiencies shall commence when the Contractor is initially notified. The Contractor shall remedy the deficiency within 24 hours of notification or submit a written statement explaining the reasons for non-performance or delay, partial or substandard performance during that period and any continuation thereof.

(e) Each Notice may refer to one or more than one Service deficiency, each of which shall be rectified by the Contractor.

(f) All Notices shall be recorded and used by the Employer in determining the Contractor's overall Service performance and shall also be used in calculating the deduction, if any, from the Monthly Service Payment as specified in Appendix D (Calculation of Service

Payment) and on whether the Employer may terminate the Agreement in accordance with Article 17.7. (Termination upon Failure to Perform).

(g) If the Contractor considers a Notice for a specific case as unjustified, or if it is unable to reach an agreement with the Employer on how to resolve the case, the Contractor may seek within a period of thirty (30) days a separate review and resolution thereof pursuant to ARTICLE 20: (GOVERNING LAW AND DISPUTE RESOLUTION).

(h) During the four (4) weeks immediately following the Commencement Date of Operation no Performance Failure Points shall be recorded in respect of Rectification Notices. However, Performance Failure Points may be recorded in respect of Failure to Perform Notices and Supplementary Failure to Perform Notices above shall apply at all times after the Commencement Date.

11.2 PENALTIES FOR FAILURE TO PERFORM.

The Employer shall be entitled to impose Performance Penalties upon the Contractor as specified in Appendix D (Calculation of Service Payment).

ARTICLE 12:

INVOICING AND PAYMENTS

12.1 INVOICING.

(a) The Contractor shall render to the Employer an invoice for each Billing Period in the form and number agreed by the Parties prior to Commencement Date and as modified by agreement of the Parties from time to time, together with the Monthly Report of Service in accordance with Part II (Particular Conditions of Operation - Specifications of Services) of this Agreement.

(b) Invoices shall be submitted by the Contractor within ten (10) days from the completion of the operating month to the Employer Representative. The latter has ten (10) days to give his approval.

(c) Only original invoices will be accepted for payment. If the original invoice is lost in transit or mislaid, a certified true copy of such invoice signed by the Contractor shall be submitted.

(d) Eraser or white ink shall not be used for alteration, and invoices amended in this way shall be rejected.

12.2 PAYMENTS.

(a) If the Employer Representative finds the invoice so submitted to be correctly prepared, adequately supported and in conformity with the requirements of the Agreement, then the Employer shall within sixty (60) days of receipt of the invoice in question from the Employer Representative remit the invoiced amount into the bank account nominated by the Contractor.

(b) In case of unduly delayed payments, the Employer shall bear interest at the Late Payment Rate from the fifth (5th) day after which such payment was originally due until the day that such payment is made.

(c) In the event that the Employer's Representative disputes any item of any invoice submitted by the Contractor, the Employer's Representative shall within thirty (30) days notify to the Contractor the item in dispute and shall specify its reasons for dispute. All undisputed items of such invoice shall be paid.

(d) In the event either Party disputes any portion or amount due by the other Party, the Party disputing such portion or amount may refer such dispute for resolution pursuant to ARTICLE 20: (GOVERNING LAW AND DISPUTE RESOLUTION). No previously undisputed amounts may be disputed more than ninety (90) days after the due date thereof.

(e) All invoices to be submitted and the payments required to be made under this Agreement shall be made in United States Dollars (US\$).

(f) No retention shall be applied for payments related to landfilling operation.

ARTICLE 13:

TAXES

(a) The Contractor shall in respect of this Agreement assume full and exclusive liability for payment of all Taxes, duties, levies, charges and contributions of any nature whatsoever that are from time to time imposed by either the Government of the Republic of Lebanon, the Municipalities, or any other fiscal authority whatsoever.

(b) The Contractor shall report and pay all such Taxes, duties, levies, charges and contributions directly to the appropriate authorities and otherwise comply with any applicable Laws and Legal Requirements.

(c) The Contractor hereby covenants and undertakes to defend, indemnify and hold harmless the Employer from any and all claims, suits, costs, liabilities, judgments, fines, penalties, demands, loss or damage including any and all expenses, disbursements, costs, legal fees, sums and amounts which the Employer suffers, incurs or is put to resulting from, or in any way connected with, any assessment or imposition, for which the Contractor is liable.

ARTICLE 14:

INSURANCE

14.1 MINIMUM INSURANCE REQUIREMENTS.

The Contractor shall, at its sole cost and expense, obtain and maintain in effect during the Agreement Term insurance policies providing such coverage as is required by applicable Legal Requirements and, at a minimum, the following:

Insurance Policy	Minimum Coverage
Professional Indemnity Insurance	Refer to Appendix to Bid
All Risks Property	Refer to Appendix to Bid (Third Party damage to property)
Contractor's All-Risk insurance	Refer to Appendix to Bid (The Works, Contractor's Equipment, Materials, Plant and fees)

Insurance Policy	Minimum Coverage
Environmental Liability Insurance	(10,000,000 US\$)
Workmen's Compensation Insurance	Refer to Appendix to Bid
Vehicle Liability	Refer to Appendix to Bid (Contractor's vehicles and transport equipment, owned and/or hired by the Contractor)

Nothing in this Agreement shall be construed to prevent Contractor, at its sole cost and expense, from procuring insurance coverage in addition to the coverage required by this Agreement.

14.2 INSURANCE CERTIFICATES.

Before commencing work on Site, the Contractor shall provide evidence to the Employer that the insurances have been effected and, not later than thirty (30) days from the Commencement Date, the Contractor shall provide copies of the policies to the Employer and shall notify the Engineer accordingly. Any of the insurance policies and coverage required to be obtained and maintained in accordance herewith and thereafter renewed in accordance with the terms of the relevant insurance policies, the Contractor shall cause its insurers or agents to provide the Employer with certificates of insurance evidencing such policies and coverage. Receipt by the Employer of such certificates shall not relieve the Contractor of any obligation, responsibility or liability under or arising from the Agreement or required by Law and Legal Requirements.

14.3 NOTIFICATION OF INSURANCE CLAIMS.

The Contractor shall notify the Employer of any occurrence likely to give rise to a claim under any insurance policy as soon as possible and in any event within fifteen (15) days of such occurrence. Thereafter, the Contractor shall handle the claim directly with the relevant insurers, shall act in the best interests of both Parties to this Agreement and keep the Employer fully informed of all claim proceedings.

14.4 APPLICATION OF PROCEEDS.

The Contractor shall apply any and all insurance proceeds received by it in connection with the damage to or loss of the Hauling Equipment, Landfilling Machinery, and Disposal Facility toward the repair, reconstruction or replacement of such Equipment and Facilities in accordance with the applicable provisions of this Agreement.

ARTICLE 15:

INCREASED COST OR SAVINGS

15.1 CLAIMS.

If either Party believes that a Change in Law has occurred that requires an adjustment of the Monthly Service Payment (other than in accordance with Appendix D (Calculation of Service Payment)), the claiming Party shall promptly deliver to the other Party a notice identifying the circumstance resulting in Increased Costs or Savings and the resulting net adjustment of the Monthly Service Payment, subject in any event to the obligation of the Contractor hereunder to minimize such Increased Costs and to maximize such Savings.

15.2 PROCEDURE.

To the extent that a claim for Increased Costs or Savings under 15.1 is agreed upon, the appropriate Monthly Service Payment shall be adjusted retroactively to the date upon which such Increased Costs were incurred or such Savings were realized.

ARTICLE 16:

FORCE MAJEURE

16.1 FORCE MAJEURE EVENT.

(a) A “Force Majeure Event” shall mean any event or circumstance not within the reasonable control, directly or indirectly, of the Party affected, but only if and to the extent that:

(i) such event or circumstance is not the direct or indirect result of the breach by such Party of any of its obligations under this Agreements or the fault or negligence of such Party;

(ii) such event or circumstance, despite the exercise of reasonable diligence, cannot be prevented, avoided or removed by such Party;

(iii) with respect to the Contractor only, if such event or circumstance occurs prior to the Commencement Date either (i) making it impossible for the Contractor to meet the Implementation Schedule or (ii) requiring the Contractor to incur material and substantial costs to satisfy the Implementation Schedule;

(iv) such event or circumstance prevents such Party from performing any of its material obligations under this Agreement, and such Party has taken all reasonable precautions, due care and reasonable alternative measures in order to avoid the effect of such event on such Party's ability to perform its obligations under this Agreement and to mitigate the consequences thereof; and

(v) such Party has given the other Party notice in accordance with Article 16.2(a).

(b) A Force Majeure Events shall include, without limiting the generality of Article 16.1(a), war (declared or undeclared), insurrection, acts of terrorism, or natural calamities such as maritime disasters, earthquakes, and volcano eruptions.

(c) For the purpose of clarification, Force Majeure Events shall under no circumstances include the following:

(i) a breakdown of any item of Equipment used by the Contractor;

(ii) a contractual commitment made by the Contractor to third parties which limits the ability of the Contractor to perform the Services;

(iii) inclement weather except as specified above; and

(iv) the inability to hire or utilize staff or personnel due to difficulties in obtaining or withdrawal of governmental, licenses or permits, including work permits.

16.2 RESPONSIBILITIES OF THE PARTIES DURING FORCE MAJEURE EVENTS.

(a) If either Party desires to invoke a Force Majeure Event to excuse delay in the performance of any obligation (other than the payment of money) hereunder, it shall advise the other Party in writing of the date of commencement of such Force Majeure Event, the nature and expected duration thereof and the actions to be taken in order to comply with requirements of this Article; provided that such notice must be sent by such Party not later than five (5) days after the date on which such Party knew or reasonably should have known of the effect of such Force Majeure Event. If a Party does not deliver such notice in accordance with the terms hereof, such Party shall not be entitled to invoke this Article (FORCE MAJEURE) to excuse the delay in the performance of any obligation (other than the payment of money) hereunder.

(b) The Parties shall make all reasonable efforts:

(i) to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by any Force Majeure Event, including recourse to alternate sources of services, equipment and materials; and

(ii) to ensure resumption of normal performance of this Agreement after the termination of any Force Majeure Event and shall otherwise perform their obligations as herein agreed to the maximum of their ability.

16.3 CONSEQUENCES OF FORCE MAJEURE EVENTS.

(a) Except as provided in this Article, the affected Party shall be excused from performance and shall not be in default of any obligation hereunder for so long as failure to perform such obligation shall be due to an Event of Force Majeure.

(b) If after the Commencement Date a Force Majeure Event shall have occurred, the following shall apply:

(i) The Parties shall consult with one another as soon as practicable after the giving of a notice as provided in Article 16.2(a) concerning the effect of such Force Majeure Event upon the ability of the Contractor to provide the Services or part thereof to be performed hereunder, in order to avoid or minimize the overall effect of such Force Majeure Event upon the Services to be performed hereunder; and

(ii) The Agreement shall be suspended (and the Agreement Term as per ARTICLE 17: (TERM AND TERMINATION) extended by the same number of days) if a Force Majeure Event shall have continued for more than sixty (60) days following receipt by the Employer of a notice from the Contractor claiming such Force Majeure Event. During the period of suspension, the Employer shall be relieved of its obligation to pay to the Contractor the Monthly Service Payment.

ARTICLE 17:

TERM AND TERMINATION

17.1 TERM OF THE AGREEMENT.

The term of this Agreement (the “Agreement Term”) shall be as stated in the Appendix to Bid – Sub-Clause 43.1.

17.2 NOT USED

17.3 TERMINATION UPON CONTRACTOR’S AND THE EMPLOYER’S EVENT OF DEFAULT.

(a) Upon the occurrence of a Contractor Event of Default or Employer Event of Default, the following procedure shall apply:

(i) The non-defaulting Party may give a notice (a “Termination Notice”) to the defaulting Party within sixty (60) days after the occurrence of a Contractor or Employer Event of Default, as the case may be, specifying in reasonable detail the circumstances giving rise to such Termination Notice, and the date on which the Party giving such Termination Notice proposes to terminate this Agreement, which date shall not be less than thirty (30) days after the date of such notice.

(ii) During the period of thirty (30) days (or such longer period as may be provided herein and set forth in the Termination Notice or as the Parties may otherwise agree) following the giving of such Termination Notice (the “Cure Period”), the Parties shall consult as to what steps shall be taken with a view to (i) mitigating the consequences of and (ii) curing such Contractor or Employer Event of Default.

(iii) At the expiry of the Cure Period, if the Contractor or Employer Event of Default described in the Termination Notice has not been cured and the Parties have not agreed to extend the Cure Period, the Party having given the Termination Notice may terminate this Agreement by giving written notice thereof to the other Party, whereupon this Agreement shall terminate upon receipt of such Notice.

(b) In the event of termination of this Agreement by the Employer due to a Contractor Event of Default, the Employer shall:

(i) cease to be under any obligation to make further payments to the Contractor until the costs, loss and/or damage resulting from or arising out of the curing the Contractor’s Event of Default have been calculated and provided that such calculation shows a positive balance due to the Contractor;

(ii) be entitled to exercise a Lien over the Contractor’s Disposal Facility for any payments due hereunder or otherwise from the Contractor to the Employer;

(iii) be entitled to employ and pay third parties to provide and complete the Services or any part thereof and to use the Contractor’s Disposal Facility for the purposes thereof; and

(iv) be entitled to deduct from any payments which would have been due from the Employer to the Contractor under this Agreement or be entitled to recover the same from the Contractor as a debt, any loss or damage to the Employer resulting from or arising out of the Termination upon a Contractor's Event of Default. Such loss or damage shall include the reasonable cost incurred by the Employer as a result of terminating the Agreement and in making alternative arrangements for the provision of the Services or any part thereof; and

(v) have the right, but not the obligation, to purchase from the Contractor the Hauling Equipment and Landfill Machinery.

(c) In the event of termination of this Agreement by Contractor due to the Employer Event of Default, the Employer shall purchase from Contractor, and Contractor shall transfer to the Employer, the Disposal Facility related Hauling Equipment and Landfilling Machinery.

17.4 THE EMPLOYER EVENT OF DEFAULT.

The following event shall be an Employer Event of Default:

a breach by the Employer of any of its material obligations under this Agreement, excluding its obligations under Article 12, which is not remedied within ninety (90) days after notice from the Contractor to the Employer of the occurrence of such breach which identifies the breach in reasonable detail and demands remedy thereof.

17.5 CONTRACTOR EVENT OF DEFAULT.

Each of the following events shall be a Contractor Event of Default:

(i) the failure of the Contractor to achieve the Commencement Date on or before sixty (60) days after the Scheduled Commencement Date which default is not remedied within thirty (30) days after notice from the Employer to Contractor demanding remedy thereof;

(ii) a breach by the Contractor of any of its material obligations under this Agreement which is not remedied within ten (10) days after notice from the Employer to the Contractor of the occurrence of such breach which identifies the breach in reasonable detail and demands remedy thereof;

(iii) the failure of the Contractor to perform the Services required under this Agreement with sufficiently skilled personnel and/or proper equipment or with sufficient materials to ensure proper performance of the Services in accordance with the terms of the Agreement;

(iv) if the Contractor ceases to perform the Services or parts thereof without prior written approval by the Employer;

(v) if the Contractor refuses or fails to perform the Services or parts thereof with such diligence as will ensure their execution within a period specified by the Employer;

- (vi) if the Contractor refuses or fails to comply with any reasonable instructions of the Employer related to the performance of the Services under this Agreement;
- (vii) if the Contractor repeatedly fails to make prompt payments to its employees;
- (viii) if the Contractor refuses or fails to provide the reports and information defined in this Agreement,
- (ix) if any of the Contractor's equipment, properties, or assets are arrested by any Government authority, court or tribunal or if the Contractor assigns to the benefit of creditors;
- (x) if any permit or license necessary to commence and/or carry out the Services required under this Agreement have been revoked or not obtained;
- (xi) failure to procure and maintain insurance cover as specified in this Agreement;
- (xii) the passing of a resolution for the bankruptcy, insolvency, winding up, liquidation of, or other similar proceeding relating to Contractor;
- (xiii) the appointment of a trustee, liquidator, custodian, or similar person in any such proceeding referred to in (i) that has not been set aside or stayed within sixty (60) days of such appointment; and
- (xiv) the making by a court of competent jurisdiction of an order winding up or otherwise confirming the bankruptcy or insolvency of Contractor, which order has not been set aside or stayed within thirty (30) days.

17.6 TERMINATION UPON CONTRACTOR'S CORRUPTIVE BEHAVIOR.

The Employer shall be entitled to terminate the Agreement without giving the Contractor the opportunity to cure in accordance with Article 17.3(a) if the Contractor has offered, or given, or agreed to give to any person any gift or consideration of any kind as an inducement or reward for doing, or forbearing to do, or having done or forborne to do any action in relation to the obtaining of the Agreement, or any other contract with the Employer, or for showing or forbearing to show favor, or disfavor, to any person in relation to the Agreement, or any other contract with the Employer, or if the like acts shall have been done by any person employed by the Contractor, or acting on the Contractor's behalf (whether with or without the knowledge of the Contractor), or if in relation to the Agreement, or any other contract with the Employer, the Contractor or any person, employed by the Contractor, or acting on the Contractor's behalf, have committed any offence under the relevant laws dealing with bribery and corrupt practices or have given any fee or reward to any the Employer employee, which have been exacted or accepted by such employee by virtue of office or employment and is otherwise than such employee's proper remuneration.

17.7 TERMINATION UPON FAILURE TO PERFORM.

In addition to any Performance Penalties which may be imposed under Article 11.2 (Penalties for Failure to Perform), the Employer may terminate the Agreement in accordance with Article 17.3(b) if more Performance Failure Points are recorded against the Contractor in any Billing Period than the equivalent of five (5) per cent of the Monthly Service Payment.

This termination provision shall not apply for the first Billing Period following the Commencement Date.

17.8 TERMINATION UPON PROLONGED FORCE MAJEURE EVENT.

The Employer may terminate this Agreement if a Force Majeure Event prevents the Contractor from performing its Services of part thereof under this Agreement for a continuous period of three hundred sixty-five (365) days following service of a notice by the Party claiming such Force Major Event.

ARTICLE 18:

TRANSFER AT THE END OF CONTRACT PERIOD

18.1 TRANSFER PROGRAM FOR DISPOSAL FACILITY'S OPERATIONAL UNITS

No less than four (4) months prior to the Transfer Date, the Contractor shall prepare and deliver to the Employer for its approval a transfer program for the operational units of the Disposal Facility, including training manuals for the Employer personnel (or personnel designated by the Employer), providing for formal and on-the-job training, including active participation in the Services and in the operation and maintenance of the Disposal Facility, for an adequate number of the Employer personnel (or personnel designated by the Employer).

18.2 CONDITION OF DISPOSAL FACILITY'S OPERATIONAL UNITS AND WARRANTIES.

On the Transfer Date, the Disposal Facility's operational units shall be in a condition of repair, cleanliness and appearance that is consistent with the Performance Standards. The Contractor shall provide the Employer on the Transfer Date with a written summary of the condition of the Disposal Facility's operational units, including a complete listing of any and all conditions that do or could impair the safe operation of the Disposal Facility. The Contractor shall execute and deliver on the Transfer Date a certificate in form and substance reasonably satisfactory to the Employer, warranting that there are no other conditions that are known to the Contractor, after diligent inquiry, that do or could impair the safe operation and performance of the Disposal Facility.

ARTICLE 19:

INDEMNIFICATION

19.1 INDEMNIFICATION BY CONTRACTOR.

The Contractor will be liable for and will indemnify, defend and hold harmless the Employer, from and against all Claims made against or Loss suffered by the Employer arising out of or related to or connected with the Contractor's failure to perform its obligations under this Agreement or negligence or other actionable conduct, including:

- (i) for any Claim or Loss arising from loss of or damage to real or personal property or death or injury to persons resulting from any act or omission

of the Contractor that arises out of or is in any manner connected with the performance of this Agreement;

(ii) under every applicable Law and Legal Requirements arising out of the condition of the Disposal Facility Site, the Contractor's operation of the Disposal Facility including the discharge, release, storage, treatment, generation, disposal or escape of pollutants or other toxic or hazardous substances from the Disposal Facility, the contamination of the soil, air, surface water, groundwater, or seawater at or around the Disposal Facility Site or any pollution, abatement, replacement, removal or other decontamination or monitoring obligations with respect thereto; and

(iii) under any Law and Legal Requirements arising out of Contractor's construction, testing, commissioning and operation of the Disposal Facility; and

(iv) for any Claim or Loss arising from the breach of any third party's intellectual property rights,

except to the extent that the Loss or Claim is attributable to the negligence or misconduct of, or breach of this Agreement by the Employer, or in the case of paragraph (ii) above, such Claim results from or arises out of the condition of the Disposal Facility Site existing prior to the Commencement Day of Operation.

19.2 FINAL DETERMINATION.

The liability of the Contractor to make a payment to the Employer for any Claim under Article 19.1 shall become fixed upon any of the following events (each a "Final Determination"):

- (i) the settlement of the Claim with the consent of the Contractor;
- (ii) an arbitral award with respect to the Claim by the appropriate arbitral tribunal.

19.3 PROCEDURES.

(a) Each Party shall notify the other Party in writing of any matter potentially indemnifiable under this Agreement as soon as such Party becomes aware of a potentially indemnifiable event; provided that the failure to provide timely notice shall not reduce the Contractor's obligations to indemnify the Employer.

(b) If after receipt of payment from the Contractor in respect of a Claim, the Employer shall later receive a payment from another source in respect of such Claim, the Employer shall promptly pay to the Contractor an amount equal to the amount of the payment received from such other source in respect of such Claim, provided, that the Employer shall not be obligated to pay an amount in excess of the amount paid by the Contractor to the Employer.

(d) the Contractor shall pay to the Employer all reasonable costs and expenses incurred by the Employer in the enforcement of this Article 19.3, if (and only if) the Contractor admits, or is adjudged, to have breached its obligation to indemnify for a Claim.

ARTICLE 20:

GOVERNING LAW AND DISPUTE RESOLUTION

20.1 GOVERNING LAW.

This Agreement shall be governed by and construed in accordance with the laws of the Republic of Lebanon.

20.2 NEGOTIATIONS.

If any dispute between the Parties arises in connection with this Agreement, the Parties shall use their best efforts to settle such dispute, or any controversies or claims arising out of, relating to or in connection with this Agreement, amicably within thirty (30) days from the time one Party has given written notice that a dispute exists to the other Party. To this end, the Parties shall discuss, consult and negotiate with each other in good faith, in order to reach a just and equitable resolution of such dispute.

20.3 DISPUTES.

If any dispute is not resolved pursuant to Article 20.2 from the date on which one Party receives written notification from the other Party that a Dispute exists in connection with this Agreement, then either Party may require the Dispute to be settled by an arbitral tribunal.

ARTICLE 21:

MISCELLANEOUS

21.1 NOTICES.

Any notice or other communication from one Party to the other Party which is required or permitted to be made under the provisions of this Agreement shall be (a) made in the English language, (b) made in writing, (c) delivered personally (by hand delivery or by courier) to the address of the other Party which is shown below or to such other address as the other Party shall by notice require, and (d) marked for the attention of the person(s) designated below or to such other person(s) as the other Party shall by notice require. Any notice or other communication made by one Party to the other Party in accordance with the foregoing provisions of this Article shall be deemed to be received by the other Party, if delivered by hand or by courier, on the day on which it is left at that Party's address.

If to **Employer**, to:

[to be filled in during contract negotiations]

[]

Attention:

If to **Contractor**, to:

[]

Attention:

Either Party may from time to time change its address or other information for the purpose of notices to such Party by giving notice specifying such change to the other Party.

21.2 ENTIRE AGREEMENT.

This Agreement constitutes the entire agreement and understanding between the Parties with respect to the subject matter herein and the services contemplated herein, and any and all previous understandings, proposals, negotiations, agreements, commitments and representations, whether oral or written, are merged herein and are superseded hereby.

21.3 WAIVER.

Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by the Parties. The failure or delay of either Party to require performance by the other Party of any provision of this Agreement shall not affect its right to require performance of such provision unless and until such performance has been waived by such Party in writing in accordance with the terms hereof. No waiver by either Party of any term or condition of this Agreement, in any one or more instances, shall be deemed to be or construed as a waiver of the same or any other term or condition of this Agreement on any future occasion. All remedies, either under this Agreement or by Law or otherwise afforded, shall be cumulative and not alternative.

21.4 CUSTOMS DUTIES.

The Contractor shall be responsible for obtaining, at its own cost, any Government consent and customs clearance required to import, and re-export, if applicable, all equipment and other materials for incorporation into, or performance of the Services, including, but not limited to, all costs related to payment of import and export duties and levies, harbor and port dues, wharfage, landing pilotage and all other costs whatsoever.

21.5 AMENDMENT.

No modification or amendment of any provisions of this Agreement shall be valid unless it is in writing and signed by the Parties.

21.6 NO THIRD-PARTY BENEFICIARY.

The terms and provisions of this Agreement are intended solely for the benefit of each Party and their respective successors or permitted assigns, and it is not the intention of the Parties hereto to confer third-party beneficiary rights upon any other Person.

21.7 ASSIGNMENT, LIENS.

The Contractor shall not sell, assign or otherwise transfer its rights or obligations under or pursuant to this Agreement without the prior written consent of the Employer. Any actual, attempted or purported sale, assignment or other transfer by the Contractor of any of its rights or obligations or interests in, under or pursuant to this Agreement shall be null, void and of no force or effect. The Contractor shall not claim any Lien, attachment or charge on the Disposal Facility required to perform the Services in compliance with the Agreement. The Contractor shall indemnify the Employer against all costs and expenses of any nature whatsoever that it suffers, incurs or is put to by virtue of a breach of this provision.

21.8 INVALIDITY.

The invalidity or unenforceability of any provisions of this Agreement shall be determined in accordance with ARTICLE 20: (GOVERNING LAW AND DISPUTE RESOLUTION). The Parties hereby agree to use good faith efforts to negotiate an equitable adjustment to any provisions of this Agreement determined to be invalid or unenforceable with a view toward affecting the purposes of this Agreement, and the validity or enforceability of the remaining provisions of this Agreement shall not be affected thereby.

21.9 CONFIDENTIALITY.

Each Party shall hold, and shall use its best efforts to cause its shareholders and Affiliates, to hold, in strict confidence from any other Person all documents and information concerning the other Party or any of its Affiliates furnished to it or its advisors, consultants, contractors or agents by the other Party in connection with this Agreement (“Confidential Information”), unless (a) required to disclose any such information by arbitral or administrative process (including in connection with obtaining from Governmental Authorities the necessary approvals of this Agreement) or by other requirements of Law, (b) disclosed to Persons providing or proposing to provide financing to the Contractor, (c) disclosed in or pursuant to the offering statement provided to potential investors in the Contractor, as the case may be, or (d) disclosed in an action or proceeding brought by either Party in pursuit of its rights or in the exercise of its remedies hereunder.

21.10 LANGUAGE.

- (a) This Agreement is being executed in the English language only.
- (b) All correspondence between the Parties shall be in either the English language or the Arabic language and all of the Contractor’s management, shall be competent to converse in the English language.
- (c) The Contractor shall maintain all material and Service records in the English language.

21.11 BINDING EFFECT.

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors, legal representatives and permitted assigns.

21.12 PUBLICITY.

Other than as ordered or required by Law or in the course of administrative or arbitral proceedings, the Contractor shall not issue any press release or make any other public announcement relating to the transactions contemplated by this Agreement without the prior written approval of the other Party as to the contents and the manner of presentation and publication of such press release or public announcement.

21.13 EXPENSES.

Each Party shall pay its own costs and expenses (including the fees and expenses of its agents, representatives, advisors, counsel and accountants) necessary for the negotiation, preparation, execution, delivery, performance of and compliance with this Agreement.

Appendix A - Service Area and Landfill Site

[TO BE COMPLETED BY THE CONTRACTOR AND TO BE CLEARED BY THE CONSULTANT AT TIME OF CONTRACT NEGOTIATIONS]

[DESCRIPTION SHALL BE BASED ON BID CONDITIONS, PROJECT RELATED INFORMATION AND DRAWINGS]

A1. Service Area

A2. Landfill Site

Appendix B - Description of Hauling Equipment, Landfilling Machinery and Disposal Facility

(including Design Conditions and Performance Data)

[TO BE COMPLETED BY THE CONTRACTOR AT TIME OF CONTRACT NEGOTIATIONS BASED ON CONTRACTOR'S PROPOSAL AND METHOD STATEMENT AS STATED IN THE BID CONDITIONS]

B1. Hauling Equipment and Landfilling Machinery

B2. Disposal Facility (incl. Operation Units) (Design Conditions and Performance Data)

Typically Equipment to include (but not limited to):

Number of each Equipment to be as required to complete the Works in accordance with the Conditions of Contract.

- *Tracked Excavator*
- *Dozer*
- *Wheel Loader*
- *Skid Steer Loader*
- *Backhoe Loader*
- *Shovel Machine*
- *Roller Compactor*
- *Grader*

- *Dumper Truck*
- *Truck*
- *Pick-Up*
- *High-Up*
- *Flat Bed*
- *Tipping Flat*
- *Crane*

- *Water Tanker*
- *Diesel Tanker*
- *Air Compressor*
- *Generator*
- *Welding Machine*
- *Lighting Tower*
- *Cleaning/Washing Machine for Equipment*

Appendix C - Implementation Schedule

*[TO BE COMPLETED BY THE CONTRACTOR AT TIME OF CONTRACT NEGOTIATIONS BASED ON
CONTRACTOR'S PROPOSAL AND METHOD STATEMENT AS STATED IN THE BID CONDITIONS]*

Appendix D - Calculation of Service Payment

ARTICLE 1 - GENERAL

The mechanism for establishing monthly payments to the Contractor following the Commencement Date of Operation is defined in this Appendix D.

The principal feature of the payment mechanism is a Monthly Service Payment in US\$/Month applicable following the Commencement Date of Operation in accordance with this Appendix D. It is the Monthly Service Payment for the Disposal (Landfilling) Services.

ARTICLE 2 - PAYMENT FORMULAE AND MECHANISM FOR DISPOSAL SERVICES

2.1 Calculation of the Actual Monthly Service Payment for Disposal Services ($AMSP_{disp}$)

The Actual Monthly Service Payment ($AMSP_{disp}$) for Disposal Services is calculated according to the Unit Rate per ton (US\$/ton), that is “Gate Fee” (at the Disposal Facility i.e. Hawakir Sanitary Landfill), agreed upon in this Contract and to the actual quantities (tons) received at the Disposal Facility and landfilled during the relevant operating month, $ALFQ_{(m)}$.

The Actual Monthly Service Payment for Disposal (Landfilling) Services ($AMSP_{disp}$), as monthly fees, are subject to adjustments resulting from the revision formulae affected by the fluctuations of fuel prices, electricity tariffs, and wage rates as well as to financial penalties in accordance with this Appendix D.

2.2 Calculation of Monthly Performance Financial Penalties for Disposal Services ($MPFP_{disp}$)

The Employer shall be entitled to impose Performance Financial Penalties upon the Monthly Payment in accordance with Article 11 of Part B. Landfill Operation - Part I (General Conditions) of the Agreement. For each of the notices below, the Employer shall apply Performance Failure Points for Disposal Services as follows:

- | | |
|--|------------------------------|
| (a) Rectification Notice | 0 Performance Failure Point |
| (b) Notice of Failure to Perform | 1 Performance Failure Points |
| (c) Supplementary Notice of Failure to Perform | 2 Performance Failure Points |

For each Operating Month (m) during an Operating Year (n), the Performance Failure Points shall be accumulated, and Performance Financial Penalties shall be calculated based on the Performance Deduction Percentage (PDP_m) applied to the Monthly Payment, in accordance with Table 1 below:

Table 1: Determination of the Performance Deduction Percentage $PDP_{m,n}$

Performance Failure Points accumulated during a Billing Period m	Performance Deduction Percentage ($PDP_{m,n}$)
0 – 4	No deduction
5 – 9	3 % (0.03)
> 10	5 % (0.05)

The Monthly Performance Financial Penalties (MPFP_{disp}) in a Billing Period (m) in an Operating Year (n) shall be calculated in accordance with the following formula:

$$\text{MPFP}_{m\text{-disp}} = (\text{MSP})_m \times \text{PDP}_m$$

Where:

MPFP _m	=	Monthly Performance Financial Penalties (US\$) applicable to Billing Period m (monthly) of Operating Year n for failure of the Contractor to meet performance requirements, in accordance with the provisions of this Appendix D and Article 11 of the Agreement.
MSP _m	=	Monthly Service Payment (US\$) for the Disposal Services in Operating Month (m).
PDP _m	=	Performance Deduction Percentage (%) in relation to the Monthly Service Payment for failure of the Contractor to meet performance requirements during the Billing Period m on Operating Year n in accordance with Table 1 above.

2.3 Price Revision for Disposal Services

2.3.1 General Provisions

The remuneration defined under this Appendix D, will be revised at the end of the Contract as of the Commencement Date in order to account for the evolution of the economic conditions by the application of formulae for the price variations.

The Contractor, will submit at the end of each Operating year of the Contract, a balance-invoice establishing the difference between the revised price based on the variation that has occurred and the price of the said previous Operating year.

The revised remuneration of a certain operating year (n) is the difference between the Actual Monthly Payments (made to the Contractor) and the Revised (Calculated) Monthly Payments during the year under consideration. The revised Monthly Payments are calculated at the end of each Operation year based on the average revised Unit Rate over a 12 month period.

2.3.2 Price Revision for Landfilling Operation

The Price per ton of waste varies according to the following formula:

$$P_1 = P_0 \times [0.3 + 0.35 \times (W/W_0) + 0.2 \times (F_1/F_0) + 0.15(E_1/E_0)]$$

(If the Landfill Facility is connected to the National Electricity Grid)

$$P_1 = P_0 \times [0.3 + 0.35 \times (W/W_0) + 0.35 \times (F_1/F_0)]$$

(If the Landfill Facility fully depends on power generated by its own generators)

Where:

A) For the first year of the Contract:

P ₁	=	Revised Unit Rate for Disposal Services (US\$/ton) at the end of each month during the year of revision
P ₀	=	Baseline Unit Rate for Disposal Services (US\$/ton) of the Contract as defined in this Contract here above and presented in the Tender Offer
W ₀	=	Lebanese minimum wages index existing at the Commencement date
W ₁	=	Lebanese minimum wages index at the end of each month during the year of the revision

F_0	=	Lebanese Fuel price index existing at the Commencement date
F_1	=	Lebanese Fuel price index at the end of each month during the year of revision
E_0	=	Lebanese Electricity Tariff / index (per KWh for industrial uses) existing at the Commencement date
E_1	=	Lebanese Electricity Tariff / index (per KWh for industrial uses) at the end of each month during the year of revision

- B) For the Year of order (n) of the Contract, P_0 , W_0 , F_0 and E_0 will assume the average values for P_1 , W_1 , F_1 and E_1 during the year of order (n-1) of the Contract. This P_0 of the year (n) will be the new Unit Rate applied in the Contractor's payments during this year (n), after taking into account the Franchise of 3% clarified herein below.

N.B.: Franchise Application For Disposal Services

- 1) At the end of the Contract, a Franchise of 3% (increase or decrease) will be applied to the above revision formula as follows:
 - In case the average revised price P_1 deviates by less than 3% (increase or decrease), no price revision shall be implemented to the Unit Rate.
 - If the revision formula results in an increase of the average revised price P_1 by more than 3%, the Contractor will be compensated for the difference between the actual percentage increase resulting from the revision formula and the Franchise value (3%). No compensation will be made for any increase of the average revised price P_1 ranging between 0 and +3%.
 - If the revision formula results in a decrease of the average revised price P_1 by more than 3%, deductions resulting from the revision formula will be applied starting from the threshold of -3%, and the Contractor will be exempted from any deductions ranging between 0 and -3%.
- 2) The Employer and the Contractor are entitled to request adjustment to the Revision Formulae in case any of the values of its variables W , F or E is doubled or decreased by half with respect to their values at the Commencement date, throughout the Contract Period.

CONDITIONS OF CONTRACT

B – Landfill Operation

PART II - SUPPLEMENTARY CONDITIONS OF CONTRACT

(Specifications of Disposal Services)

	Page
ARTICLE 1: DEFINITIONS.....	2
ARTICLE 2: SCOPE OF DISPOSAL SERVICES	3
ARTICLE 3: STANDARDS AND GUIDELINES FOR DISPOSAL SERVICES	4
ARTICLE 4: CORPORATE IDENDITY.....	4
ARTICLE 5: SITE CONDITIONS.....	4
ARTICLE 6: GENERAL REQUIREMENTS FOR DESIGN AND CONSTRUCTION.....	5
ARTICLE 7: GENERAL REQUIREMENTS FOR OPERATION OF DISPOSAL FACILITY.....	6
ARTICLE 8: SANITARY LANDFILL.....	7
ARTICLE 9: VEHICLES AND EQUIPMENT.....	10
ARTICLE 10: IDENTIFICATION AND PROTECTIVE EQUIPMENT	11
ARTICLE 11: HOURS OF ACCEPTANCE OF MSW AND PUBLIC HOLIDAYS.....	11
ARTICLE 12: PERFORMANCE MONITORING	11
ARTICLE 13: REGULAR ANALYSIS	12
ARTICLE 14: INFORMATION REQUIREMENTS AND REPORTING.....	13
APPENDIX A - QUALITY STANDARD OF MSW BEING LANDFILLED.....	19
APPENDIX B - ENVIRONMENTAL GUIDELINES FOR THE DESIGN AND OPERATION OF SANITARY LANDFILLS.....	20

ARTICLE 1: DEFINITIONS

For the purpose of these Specifications, the following capitalized words, terms and phrases used, including any recitals, appendices, schedules and attachments hereto, shall have the meanings set forth in Article 1 of Part I (Conditions of Contract) of this Agreement and in this Article 1.

“Biodegradable Municipal Waste (BMW)” means the biodegradable fraction of MSW that is capable of undergoing aerobic or anaerobic decomposition, such as food and garden waste, wood, green waste and paper and cardboard, the organic part of market waste or Biowaste.

“Biowaste” means organic material and/or BMW from households, restaurants, market, etc. separated by the MSW-Producer at source and collected under a separate collection scheme. After implementation of such schemes the Contractor will have to receive and treat this kind of waste material.

“Green Waste” means organic waste, including leaves, grass, foliage and branches originating from the maintenance of gardens, yards, parks and vegetation along public roads.

“Disposal Facility” means the Landfill operated for the sound and disposal of MSW.

“Hazardous Waste” means any waste that by virtue of its nature or composition poses a severe threat to human health or the environment and will include, but not necessarily be limited to, wastes listed in Annex 1 in the Basel Convention on the Transboundary Movement of Hazardous Waste and Their Disposal. This includes waste which is toxic, flammable, corrosive, radioactive, explosive or otherwise dangerous such as motor oil, paint, solvents, dry cells and vehicle batteries, pesticides, metallic and/or oily sludge, infectious or otherwise hazardous medical wastes, etc.

“Recycling” means the sorting and turning of Recyclable Materials and fractions of MSW into new products, electrical or thermal energy or chemical substances by reprocessing or re-manufacturing.

“Recyclable Materials” means materials such as newspapers, cartons, metals, cans glass, plastics, textiles, bones etc. which could be separated from mixed MSW or in case of source separation can be entered into the recycling process directly or after further sorting or other treatment. In case source separation concepts will be implemented the ownership of these materials will stay with the institution responsible for the collection services.

“Residential Area” means any accumulation of houses or flats, where more than 100 people live permanently, or where any sensitive institution such as hospitals, schools, churches, mosques, etc. are located.

“Residential Waste” means MSW produced by private households, containing waste produced from activities in the house or flat, related gardens and from related domesticated animals except construction waste.

“Sanitary Landfill” (Landfill) means a MSW disposal site for the long-term final disposal of MSW or fractions thereof on land. A Sanitary Landfill is an engineered construction and is equipped with systems to capture and treat leachate water and landfill gas.

“Site” means, collectively, those parcels of land and marine area as specified in this Agreement which shall be secured and provided by the Employer for the Disposal Facility, in order to perform the Disposal Services, and in accordance with the requirements of this Agreement.

“Sorting” means the separation of MSW into different waste streams either manually or mechanically, e.g. by magnetic separator, screening device, air classifier or any other separation techniques. The goal of sorting is to separate different Recyclable Materials or waste streams, which then can easier be recycled or treated in subsequent processes.

“Sorting Facility” means the facility where Sorting of MSW is carried out. The sorting process could be combined with Composting, Mechanical-Biological Treatment, or Other Treatment.

“Source Separation” means the separation of components of MSW, such as Recyclable Materials, Biowaste, Green Waste, wet and/or dry MSW fraction, etc. at the MSW-Producers’ premises prior to mixing them into MSW and their separate presentation for Collection.

ARTICLE 2: SCOPE OF DISPOSAL SERVICES

- 2.1. During the term of this Agreement, the Contractor shall landfill the MSW Rejects received in bales or in bulk from the designated Sorting Facilities in the Service Area. In order to be able to perform the services the Contractor shall construct and commission fully operational the Disposal Facility including the necessary infrastructure (access roads, connection to power, water, and telecommunication grids, waste water disposal and other services) and any necessary vehicles.
- 2.2. At the Disposal Facility under this Agreement, the Contractor shall accept the MSW delivered from the designated SORTING Facilities.
- 2.3. Any material landfilled shall comply with the requirements of Appendix A below.
- 2.4. By measures undertaken under Clauses 2.2 and 2.3, the Contractor shall ensure that all MSW received from the designated SORTING Facilities are properly sorted and treated.
- 2.5. The Contractor shall construct and operate the Sanitary Landfill, using techniques consuming as little as possible landfill space.
- 2.6. The Contractor is fully responsible for the proper disposal of the MSW quantity delivered and accepted at the Disposal Facility. The Contractor has to ensure sufficient reserves and flexibility at the Disposal Facility, in order to bridge times of break-downs, major overhauls, etc., to completely dispose of the received MSW quantities.
- 2.7. The Contractor shall not accept any waste types other than MSW, off-specification Recyclable Materials, Biowaste, fractions of MSW, bulky items (including small fractions, portions of debris resulting from house renovations, etc.), or waste generated from street sweeping (including Green Waste) under this Agreement.

ARTICLE 3: STANDARDS AND GUIDELINES FOR DISPOSAL SERVICES

- 3.1. The Disposal Facility shall be constructed and operated in accordance with LIBNOR standards and/or other Lebanese standards. In absence of any Lebanese standards, a consistent set of internationally recognized standards shall be used.
- 3.2. Environmental standards issued by the Ministry of Environment shall apply:
 - (a) The Lebanon National Standards for Environmental Quality (NSEQ),
 - (b) The Environmental Guidelines for MSW Disposal (Landfilling) Facilities,
 - (c) For gaseous emissions, Standards of the EU shall apply (if no Lebanese standards are applicable).

In absence of any other environmental standards the EU-Environmental Standards shall apply.

- 3.3. For the Landfill design, construction and operation the EU-Directive 1999/31/EC (Landfill Directive) shall be generally applied.
- 3.4. In case of contradictory stipulations between the “Lebanese Standards and Regulations” and the specifications mentioned hereunder in this Part 2 (Technical Specifications) of this Service Agreement, the stipulations of the Lebanese Standards and Regulations shall prevail.

ARTICLE 4: CORPORATE IDENTITY

- 4.1. The Contractor shall demonstrate corporate identity marking all its activities, equipment, publications etc. with the same logo or slogan and painting the Disposal Facility, vehicles and equipment in the same colours.
- 4.2. The Contractor shall support public awareness and education campaigns for the introduction and continued maintenance of source separation and separate collection schemes to the extent as this might improve recycling and consequently reduce the Landfill proportion.

ARTICLE 5: SITE CONDITIONS

- 5.1. The Site where the Disposal Facility will be constructed is to be described in separate documents, which form part of the Conditions of Contract (Appendix A *Service Area and Landfill Site* and Appendix B - *Description of Hauling Equipment, Landfilling Machinery and Disposal Facility* of B - Landfill Operation - Conditions of Contract - Part I)
- 5.2. The Contractor shall provide and maintain all necessary infrastructure required for the sound operation of the Disposal Facility, comprising, but not limited to:
 - (a) access road to the Disposal Facility, constructed for heavy duty vehicles as used for waste transportation under this Agreement;
 - (b) electric power supply at an appropriate voltage level;

- (c) fresh water supply;
- (d) wastewater discharge;
- (e) telecommunication connections and
- (f) Where there is no such infrastructure on the Disposal Site the Contractor shall design, finance and construct the necessary connections to the existing grid.

ARTICLE 6:

GENERAL REQUIREMENTS FOR DESIGN AND CONSTRUCTION

- 6.1. The construction and operation of the Disposal Facility shall include appropriate measures to achieve the following general goals:
- (a) High flexibility regarding variation of incoming MSW rejects in quantity;
 - (b) Minimization of emissions into air and water;
 - (c) Prevention of soil contamination;
 - (d) Minimization of risks for health and safety of employees;
 - (e) Minimization of noise and tremors;
 - (f) Minimization of consumption of energy, water and other natural resources;
 - (g) Architectural design in line with surroundings;
 - (h) Minimization of nuisances and hazards arising from
 - (i) Fire
 - (ii) Wind-blown materials
 - (iii) Birds, vermin and insects
- 6.2. The Disposal Site shall comprise, but not be limited to:
- (a) Permanent internal roads, paved and constructed for heavy duty vehicles;
 - (b) Sufficient parking lots for employees and guests;
 - (c) Office and staff buildings including all required equipment for office, telecommunication and sanitation;
 - (d) Storage facilities for spare parts and maintenance and repair workshops;
 - (e) Garages for vehicles;
 - (f) Sufficiently large waiting area at the entrance to allow entering vehicles to queue for the weighbridge without interfering with traffic outside the Disposal Site;
 - (g) Appropriate fire fighting equipment.
- 6.3. The Disposal Facility shall be fenced in order to prevent trespassers. The gates shall be locked outside operating hours. Additionally the Disposal Facility shall be surrounded by suitable trees (where possible), placed behind and along the fence, in order to isolate the noise and prevent visual intrusion. The trees shall be grown and distributed equally along the fence.
- 6.4. The Disposal Facility shall be equipped with a weighbridge, ensuring that no delivering vehicle will have to wait more than 30 minutes before being weighed.

- 6.5. The Disposal Facility shall be equipped with a sufficient reception area in order to receive MSW rejects from designated Sorting Facilities.
- 6.6. Appropriate measures shall be taken for odor and emission control and any off-gas shall be treated by appropriate systems in order to comply with the applicable environmental standards.
- 6.7. An appropriate drainage system shall be implemented for rain water coming from those parts of the site where no waste is handled. The rain water shall be safely discharged at authorized discharge points or storm water channels.
- 6.8. The formation of wastewater shall be minimized by appropriate measures. Any arising waste water shall be collected, if required by the type of the waste water, in separate collection systems, e.g. sanitary wastewater, leachate water from waste, process water from gas-cleaning, etc. Each stream shall either appropriately be treated on-site prior to discharge in accordance with the NSEQ standards for discharge into surface water or be pre-treated, if required, and be transported to an appropriate external wastewater treatment facility.
- 6.9. Every closed construction inside which MSW or fractions thereof, is being handled and human beings are working shall be equipped with a ventilation system with a sufficiently large air exchange rate in order to maintain an acceptable air quality inside. In any case the air exchange rate shall exceed 2 exchanges per hour.
- 6.10. The Contractor is responsible for securing parking for its vehicles when they are not in use, in sufficient size and preparation. No vehicle shall be parked in Public Area when off duty.

The Contractor will have access to existing Workshop Hangar for his equipment maintenance and repair requirements when necessary as mentioned in Article 4 of B - Landfill Operation - Conditions of Contract - Part I. Access shall be coordinated with Employer and Contractor present on Site.

- 6.11. The Disposal Site shall be equipped with social buildings for the workers to change their clothes and with showers and toilets.
- 6.12. The site shall be provided with environmental protection measures as to not contaminate air, water or soil, as e.g. oil-water-separators and sand precipitators and shall be equipped with receptacles for hazardous wastes and toxic liquids produced on the site.

ARTICLE 7:

GENERAL REQUIREMENTS FOR OPERATION OF DISPOSAL FACILITY

- 7.1. The Contractor shall keep the Disposal Facility in good repair, appearance and sanitary condition and ensure a sufficient supply of spare parts on hand to ensure the timely and continuous performance of the Disposal (Landfilling) Services.
- 7.2. The Contractor shall renew any equipment or component of equipment at its own expenses whenever needed for proper performance of the Services.
- 7.3. The Disposal Facility shall be operated by qualified and skilled operators. The Contractor shall ensure, that sufficient operating staff is available at the site at any operating time required.

- 7.4. At the weighbridge unit and the unloading area, the Contractor shall carry out an inspection of the incoming waste, especially in order to identify wastes other than MSW. Any load, where such material is identified, shall be rejected.
- 7.5. Only entities approved by the Employer are allowed to deliver their MSW or fractions thereof, Recyclable Material, or Biowaste to the Disposal Facility. Any entity's vehicle not possessing a valid approval of the Employer shall be rejected.
- 7.6. At the Disposal Site, any incoming waste shall be registered at the weighing station. The register shall be kept in an electronic format and register at least:
- (a) Vehicle ID;
 - (b) Weight of vehicle with incoming waste;
 - (c) Weight empty of vehicle;
- The electronic registration shall allow online transmission of all data registered to the Employer.
- Additionally the registered data shall be submitted to the Employer on a monthly basis in an electronic format. The Employer will define the type of format.
- 7.7. Any delivery to the Sanitary Landfill shall also be registered.
- 7.8. The Contractor shall immediately purchase, rent, or lease vehicles and equipment to satisfy additional demand in transportation capacity or replace retired vehicles and equipment.
- 7.9. Landfilling of delivered waste shall be carried out in less than 12 hours upon delivery in order to prevent degradation, odor, formation of leachate, and attraction of vermin and insects.
- 7.10. The Contractor shall take adequate measures to prevent the attraction of vermin.
- 7.11. The Contractor shall establish a quality management system in accordance with ISO 9001 or equivalent for the Disposal Facility. The quality management system shall achieve certification within 6 months after Commencement Date.
- 7.12. The Guidelines, established by the Ministry of Environment (MoE):

"Environmental Guidelines for the Design and Operation of Sanitary Landfills" shall be considered (Appendix B below).

ARTICLE 8: SANITARY LANDFILL

- 8.1. Any organic fraction, whether separated as BMW or as part of MSW, programmed to be landfilled, shall at least comply with the requirements of Appendix A below.
- 8.2. The Contractor shall prepare an overall design for the possible complete lifetime of each used landfill site. The Landfill shall be divided into cells as shown on the drawings. The preliminary design shall demonstrate the final shape of the complete Landfill at completion. The Contractor shall consider in the design a clear separation of the part of the landfill, which will be operated by him under this agreement and

the part operated by a possible successor. The Contractor eventually shall develop only those cells, which are needed for the term of this Agreement. The detailed design shall be accompanied by static calculations for the different states of landfill construction and final shape, carried out for the Landfill as a whole and for different areas with slopes. The calculations shall be updated, if and as required by Engineer, during construction and operation phase.

- 8.3. The landfill shall be equipped with a basal liner in accordance with Annex 1 of the most recent version of the European Union COUNCIL DIRECTIVE 1999/31/EC on the landfill of waste. It shall be assumed, that no geological barrier does exist. The complete barrier shall be designed artificially with the basal liner system. The slopes of the different areas of the basal liner system shall be oriented on the function of the leachate collection system.
- 8.4. The basal liner and protection shall be a combination liner system as shown on drawings.
- 8.5. A leachate drainage system shall be installed above the basal liner as shown on drawings.
- 8.6. The leachate shall be collected and connected to leachate existing manhole which is directed to a leachate collection existing tank sealed with an impermeable liner. The leachate is treated by Contractor present on Site prior to discharge to reach and ensure a quality permitted to be discharged to surface water.
- 8.7. Appropriate measures shall be taken in order to control the accumulation and migration of landfill gas. Landfill gas shall be collected and conveyed to existing Gas Flare Plant in which the gas collected is flared at 1,200°C by Contractor present on Site. The collection system shall be realized prior to construction of the capping.

Above requirements for the landfill gas collection system may be adjusted to reduced gas production rates, caused by prior treatment of the MSW and depending on the maturation degree of the waste being landfilled. In this case the Contractor shall prove, that due to characteristics of the waste landfilled lower landfill gas production rates justify a reduced gas collection and treatment system, a passive system or even a control system only, subject to approval of the Employer.

- 8.8. After being filled each cell shall be covered provisionally, until a final capping will be installed.
- 8.9. The final capping with a sealing impermeable to water to prevent infiltration of rain shall be built.
- 8.10. All temporary landfill roads shall be constructed to allow use by the vehicles delivering waste or any other material to be landfilled at any season and weather conditions. Building rubble or gravel might be used for construction. Separate ways shall be constructed for landfill compactors and bulldozers.
- 8.11. An appropriate drainage system shall be implemented for rain water coming from those parts of the site where no waste is handled.
- 8.12. The MoE requirement to plant trees on the surface does not apply, instead, grass shall be planted on top of the landfill. Moreover, trees will be planted at the East Side of the Site along the limit with the Municipal Plot in order to prevent distribution of windblown emissions.

- 8.13. The Contractor shall ensure at all times a sufficient number of operating vehicles on the landfill, comprising at least of
- (a) landfill compactor,
 - (b) chain bulldozer,
 - (c) wheel loaders with shovel of minimum volume of 2 m³, and
 - (d) trucks for transportation of daily cover and of minimum payload 10 t.

Further vehicle types shall be provided as necessary.

- 8.14. The landfill shall be equipped with a wheel washing facility so that dirt and litter originating from the site is not dispersed onto public roads and the surrounding land.
- 8.15. The Contractor shall establish a waste location cadastre showing which waste has been deposited where. The cadastre has to be made available to the Employer on its request at any time.
- 8.16. After passing the inspection and registration at the weighbridge any incoming vehicles shall be directed along a defined route to the tipping place.
- 8.17. Waste shall be deposited in layers. Each layer has to be compacted thoroughly prior to deposition of the next layer. In total the emplaced waste shall have an average density of at least 800 kg/m³. The density achieved by the Contractor has to be proven by the Contractor based on weighbridge data and landfilled volume.
- 8.18. The Contractor shall take appropriate measures to prevent water from precipitation entering into the landfill body.
- 8.19. Delivered waste has to be covered with soil or other suitable material and sloped at the end of each working day. The covering layer shall have a nominal thickness of 150 mm.
- 8.20. Leachate and landfill gas treatment facilities are operated, maintained and repaired by Contractor present on Site in accordance with the manufacturer's instructions.
- 8.21. Waste must not be burned on the site under any circumstances.
- 8.22. The Contractor shall carry out a topographical survey of the complete landfill site once a year.
- 8.23. The following guidelines of the Ministry of Environment shall be considered (besides others): "Environmental Guidelines for the Design and Operation of Sanitary Landfills" (as detailed in Appendix B below).

**ARTICLE 9:
VEHICLES AND EQUIPMENT**

- 9.1. The Contractor shall provide an appropriate number of vehicles and equipment for the transportation of the MSW rejects in bales, for transport within the Disposal Facility. The vehicles and equipment used shall be adequate to perform the Services. In no time vehicles older than 10 years shall be used. Vehicles shall comply with appropriate environmental standards for air emissions and fuel burning.
- 9.2. The Contractor shall immediately purchase, rent, or lease vehicles and equipment to satisfy additional demand in transportation capacity or replace retired vehicles and equipment.
- 9.3. The Contractor shall paint all its vehicles under the Agreement in the same pattern. The Contractor's name, telephone number, and vehicle number shall be visibly displayed on all vehicles in letters and figures not less than ten (10) cm high.
- 9.4. The Contractor shall ensure that all vehicles are registered and operate in compliance with all applicable laws and regulations.
- 9.5. The Contractor shall keep all vehicles and equipment used for performing the Services in good repair, appearance and sanitary condition. The average fleet downtime shall be no more than twenty five (25) percent. A sufficient supply of spare parts shall be kept on hand to ensure the timely and continuous fulfilment of this Agreement.
- 9.6. All vehicles and landfilling equipment and machinery shall be operated by qualified and licensed operators.
- 9.7. All vehicles shall be sufficiently secure so as to prevent any spilling or littering of MSW, other materials or liquids. All vehicles transporting MSW or materials which could leak out shall be equipped with drainage tanks. The waters captured and held within the drainage tanks are to be emptied only at the officially designated disposal sites or the garage of the Contractor. Open vehicles shall at least be covered with a tarpaulin if transporting materials.
- 9.8. No vehicles shall be wilfully overloaded.
- 9.9. All transportation vehicles shall maintain a log of time and movement, including: departure time from the Disposal Facility at the start of work, arrival time at and departure time from the designated Sorting Facilities, and arrival time at the Disposal Facility at the end of work.
- 9.10. Vehicle logs shall contain the loads weight, downtime and the nature of any break down and repair activities. Data from the vehicle logs shall be collated and presented in a monthly report of service delivery from the Contractor to the Employer. In addition, the Employer shall have access to the vehicle logs upon demand.

**ARTICLE 10:
IDENTIFICATION AND PROTECTIVE EQUIPMENT**

- 10.1. The Contractor shall ensure that, when requested to do so, any of its employees shall disclose his/her identity and status as an employee of the Contractor and shall not avoid doing so. The Contractor shall provide all its personnel with identification cards, with their name, photo, and identification number and request them to carry the said identification cards at all times for monitoring purposes.
- 10.2. The Contractor shall provide readily recognizable, brightly colored shirts (or vests) and pants of a single design to all its workers, to be worn at all times when performing Services under this Agreement, so that they can be readily observed and their performance can be readily monitored. The uniforms shall be equipped with light reflecting stripes in case work is performed during darkness.
- 10.3. The Contractor's name and a fixed telephone number have to be marked easily visible on the uniforms. Slogan and logo can be added, but this is not compulsory.
- 10.4. The Contractor shall provide protective wear (helmets, shoes, gloves, goggles, etc.) to all employees, wherever this is required by applicable standards or laws or due to the nature of the task to be performed by the employees for use at all times during performance of Services under this Agreement.
- 10.5. Uniforms and protective equipment shall be kept clean and in good condition, and be replaced by the Contractor as it becomes worn or damaged, and at least on a semi-annual basis.
- 10.6. The Contractor shall be responsible for providing regular medical check-ups for its Staff, on at least a semi-annual basis, and for providing a program of suitable inoculations, having first obtained medical advice from a medical practitioner.

**ARTICLE 11:
HOURS OF ACCEPTANCE OF MSW AND PUBLIC HOLIDAYS**

- 11.1. MSW shall be accepted 12 hours a day, 7 days a week and 365 days a year, irrespective of public holidays at no additional cost to the Employer. The Contractor shall apply and obtain in writing from the concerned authorities permissions for working outside the legal normal working hours.
- 11.2. Should any additional working hours be required per day, they shall be carried out after the consent of the Engineer, and at no additional cost to the Employer.

**ARTICLE 12:
PERFORMANCE MONITORING**

- 12.1. The Employer has responsibility for monitoring and controlling the performance of the Services conducted under this Agreement. The Employer may assign this responsibility to the

Employer's staff, including health inspectors and police working with other authorities of government, and/or special Consultants for supervision services.

The Ministry of Environment (MoE) is entitled to monitor the environmental compliance of the Disposal services conducted under this Agreement.

The Contractor shall cooperate fully with the efforts of the Employer to monitor and control the Services and at all times shall allow the Employer to inspect all records and documents maintained by the Contractor regarding the Services, and to inspect the Disposal Facility, vehicles and equipment, including spare parts inventories, stores, and workshop repair facilities.

The Contractor shall provide office space at the Disposal Facility for the Employer keeping permanently/temporary supervision staff of up to two persons.

12.2. The basic quality criteria for the assessment of the Services are:

- (a) Compliance with all standards and rules,
- (b) Absence of complaints and claims;
- (c) Observance of the reporting requirements;
- (d) Satisfaction of reasonable Notices of the Employer no later than 24 hours from notification, either through solving the problem or submitting a schedule on how to solve the problem.

12.3. The Employer will attend any scheduled inspection by the authorities. The Employer also reserves the right to accompany the Regular Analysis as specified in 0.

ARTICLE 13: REGULAR ANALYSIS

13.1. The Contractor shall carry out, or assign an independent institution (acceptable to the Employer) to perform, composition analysis of the MSW that is being landfilled. An analysis campaign shall be carried out every 2 years, the first being carried out during design phase. Each analysis campaign shall consist of four tests covering the different annual seasons, i.e. samples shall be taken during 4 consecutive quarters in each analysis campaign.

13.2. The Contractor shall assign an independent laboratory acceptable to the Employer, which shall carry out the following tasks (as applicable to the Landfill Operation Works):

- (a) Quarterly check the analysis results of permanently measuring devices for treated leachate, discharged wastewater and ambient air quality and emitted gases and require recalibration, if necessary,
- (b) Quarterly, take at least 3 samples of treated leachate, discharged wastewater, and landfill gas flow, as well as ground water samples of each of the monitoring wells at the landfill and surrounding sea water and analyse for all those pollutants and standards, as specified in the respective stipulations of the Lebanese environmental standards as well as the Contractor's guarantees,
- (c) Quarterly, carry out odour measurements at the Disposal Facility.

Additional analysis and measurements might be required in case of protests from the neighbourhood.

ARTICLE 14: INFORMATION REQUIREMENTS AND REPORTING

- 14.1. Any reports and documentation required under the Disposal Service Agreement shall be submitted to the Employer in 2 printed copies and in digital form (e.g. on CD) in a format readable for the Employer.
- 14.2. The Contractor shall organise meetings with the Employer on topics of the Services. These shall take place:
- (a) Bi-weekly during the first four (4) months of the construction phase and monthly during the operation phase,
 - (b) On request of the Employer or the Contractor, in case of problems or non-compliance.

The Contractor shall prepare the project progress meetings and write the Minutes of Meeting, which shall be submitted 3 days after the meeting to the Employer at the latest.

- 14.3. During Construction Phase: The Contractor shall submit the following data, documentation and reports:
- (a) Monthly Project Status Report, on the tenth of the following month: The Project Status Report shall address:
 - (i) Summary;
 - (ii) Overall project implementation schedule and progress to date of status report;
 - (iii) Overall deviations from implementation schedule, reasons and measures to mitigate;
 - (iv) Project implementation progress at each site including problems and mitigation measures;
 - (v) Project organization and management;
 - (vi) Photographs of the sites, documenting project progress.

- (d) Audit of Project Progress

In case there are indications for a potential major delay or operation cost overrun or other events which might endanger the project implementation the above Monthly Project Status Report shall be extended to an audit of the project explaining the impact on the project implementation and recommendations for corrective measures;

- (e) Functional, performance and completion test report and certificates, three days after testing:

The Contractor shall provide test results and reports including the final acceptance protocol and prepare a report summarizing their findings and recommendations

- (f) Construction log

The Contractor shall maintain a daily construction log, accessible to the Employer if requested, with the following information:

- (i) Staff on each site;
- (ii) Equipment on each site (delivered, stored, installed);
- (iii) Construction materials (delivered, stored, used);
- (iv) Weather conditions;
- (v) Meetings and minutes;
- (vi) Instructions of the Employer;
- (vii) Other events.

Any receipts on materials, equipment, machinery etc. shall be stored and made accessible to the Employer if requested.

In case of landfills, the Contractor shall produce drawings showing the present situation as well as a comparison to the plan every year, together with their annual report.

14.4. End of Construction Phase (by Landfill Cell):

These manuals, plans, documents etc. shall be submitted four (4) weeks prior to Commencement Date of operation of each finished Landfill Cell:

(a) Operation and maintenance manuals

The O&M manual shall include at least:

- (i) organizational structure and responsibilities;
- (ii) reference to all relevant design and other reports, specifications etc. in order to provide a complete bibliography on the structures such that the operation and maintenance staff can understand the basis of their functions;
- (iii) details of any problems encountered during construction which may have a bearing on the future safe operation and decommissioning of the facilities;
- (iv) full operating instructions for all systems; drawings, diagrams, charts, notices etc. to facilitate understanding of safe operation and maintenance; special handling arrangements for waste streams not permitted to be disposed and wastes which require checking;
- (v) maintenance schedule and consumables required to give reliable operation of the facilities;
- (vi) Safety regulations;
- (vii) Routine controls and emergency plans;
- (viii) List of recommended spare and wear parts;
- (ix) Operation schedules and overall operation concept.

(b) Monitoring program

- (i) Determinants and monitoring frequencies for emissions as surface water, groundwater, leachate and landfill gas, off gas, etc.;
- (ii) Analyses of waste and product streams;

(c) Training program and qualification profile for operating and supervising personnel;

(d) Quality assurance manual;

(e) Information systems;

(f) Site Manual.

The site manual shall include:

- (i) details of the desk study and site investigation;
- (ii) explanation of plant philosophy and objectives;
- (iii) environmental assessment;
- (iv) details of design and construction, including specifications, drawings and construction quality assurance documentation;
- (v) working plan and other submissions;
- (vi) statutory records relating to health and safety;
- (vii) survey records and plans including void take-up;
- (viii) waste input details, consignment and transfer notes, waste disposal locations and development of working areas and phases;
- (ix) details of facility operation and emission management;
- (x) photographic records;
- (xi) environmental monitoring data;
- (xii) registers of complaints, records of non-compliance and remedial measures;
- (xiii) visitor and public records;
- (xiv) record of performance monitoring data including internal and external audits;
- (xv) etc.

(g) Landfill restoration plan

The restoration plan should deal with such matters as:

- (i) soil stripping and its storage;
 - (ii) final landform including settlement;
 - (iii) re-vegetation and vegetation scheme;
 - (iv) aftercare, including leachate and gas management;
 - (v) the quantity of the soil needed;
 - (vi) integration of the restoration into the surrounding landscape;
 - (vii) post-restoration management;
 - (viii) financing restoration and aftercare;
 - (ix) run-off and drainage.
- (h) Complete "As-Built" record of the actual alignments, levels, dimensions etc. to which the works have been constructed (CAD drawings) including calculations and descriptions;
- (i) Completion reports for all major structures or elements of the contract works. Completion reports shall also include details of construction methodology, test results, O&M recommendations etc;
- (j) Detailed documentation upon vehicles, equipment and human resources to be used to perform the Services, as proposed in the Contractor's bid, amended in the contract negotiations as well as during design and construction phase. The documentation shall include
- (i) The manufacturer, engine size, body capacity, identification number and manufacturing date of each unit of equipment to be used;
 - (ii) All staff shall be named and their assigned category of work shall be listed. Professional credentials and work history shall be provided for management staff.

- (k) Quality and quantity requirements defined by each offtaker of materials and products, extracted and produced under this Agreement as well as a quality assurance concept regarding the safe achievement of these requirements.

14.5. Operation Phase: During the operation phase the following reports and documents shall be prepared and/or kept updated by the Contractor, in addition to the General Requirements of the Technical Specifications:

- (a) Daily Reports/Logs (separately for each Disposal Facility) and kept accessible for the Employer on request:
 - (i) Specifying all activities;
 - (ii) Log of problems, scheduled and unscheduled outages, breakdowns, maintenance or construction works, replacements of vehicles, machinery or staff, weather conditions etc. of plants/facilities or parts thereof;
 - (iii) Transportation vehicles (used/not used, reasons for non-usage of vehicles, average payloads, distance driven, etc.);
 - (iv) Received, treated, produced, stored, marketed, transferred, transported quantities and types of waste, products, residues, consumables (cover material etc.) broken down into type of delivery truck, origin (facility, municipality, district, etc.), off-taker (company, use, etc.);
 - (v) Rejected non-permitted types of waste and their origin (hazardous, hospital wastes, etc.);
 - (vi) Quantities and analyses of emissions, like leachate, landfill gas, off gas etc. collected and treated incl. comparison with permit values and guarantees;
 - (vii) Miscellaneous (unusual occurrences, disputes, work accidents, emergency situations, complaints, notices and problems arising and solutions of these, etc.);
 - (viii) etc.
- (b) A monthly report of service delivery shall be collated to the monthly invoices, being submitted at the tenth on the following month containing the following:
 - (i) Aggregated values of Daily Reports/Logs;
 - (ii) Daily quantities of MSW received at the Disposal Facility;
 - (iii) Daily quantities landfilled;
 - (iv) Scheduled and unscheduled outages and emergency situations as well as downtime of the Disposal Facility or parts thereof, and the nature of any outage and repair activities;
 - (v) Maintenance works and repairs carried out at the Disposal Facility;
 - (vi) Log of complaints, notices and problems appeared and solutions thereupon.
- (c) Quarterly reports shall be submitted on the technical performance of the Services one month after the end of the respective quarter. This report shall include any information in relation to the Services as the Employer shall reasonably request. The data given shall be for the reporting period.
 - (i) Landfill operation (separately for each landfill cell):
 - Emplaced waste types and quantities;
 - Weather conditions (especially rainfall)
 - Quantities of leachate collected and treated;
 - Monthly results of analysis of discharged leachate;

- Quantities of landfill gas collected and treated;
 - Quarterly results of gas analysis;
 - Electricity produced, if landfill gas is used for electricity generation;
 - Monthly results of surface water and ground water monitoring data;
 - Results of annual survey (only in annual report);
 - Remaining volume and lifetime of landfill;
 - Replacements of vehicles or staff;
 - Log of problems, outages, breakdowns, etc.
- (ii) Landfill construction (separately for each landfill cell):
- Implementation schedule and achieved position;
 - Achievements in construction;
 - Construction materials used;
 - Log on problems and solutions;
 - Status of complete landfill cell.
- (iii) Miscellaneous
- Analysis results of emissions monitoring (leachate, landfill gas, off-gas, surface run-off, groundwater, sea water, etc.) incl. comparison with permit values and guarantees;
 - Consumption of consumables (electricity, water, cover material, etc) and operation costs (maintenance, R & R);
 - Information on safety and security;
 - Special events;
 - Other activities (visitors guided);
 - Disputes.
- (d) A consolidated annual report shall be submitted on the same topics as the quarterly reports one month after the end of the operating year including a landfill operation plan which shall comprise:
- (i) Construction activities concerning the actual Lot such as access and haulage roads, leachate and gas collection system, intermediate cover, final cover, earthworks etc.,
 - (ii) Schedule, activities and areas,
 - (iii) Being capped,
 - (iv) Being prepared to receive waste,
 - (v) Capped and restored,
 - (vi) Untouched,
 - (vii) Being actively filled,
 - (viii) Internal movement of waste,
 - (ix) etc.

14.6. The Employer reserves the right to amend and adjust the content requirements of the reports.

- 14.7. For any major change at the Disposal Facility the Contractor shall inform the Employer and submit all necessary documentation for the Employer's "no objection".
- 14.8. The Contractor shall keep updated the complete documentation of the Disposal Facility, equipment and staff throughout the term of the Agreement.
- (a) As the Disposal Facility is used, maintenance repair or improvements will change the Facilities by the time. The Contractor shall provide the Employer with all modifications, updating As-Built-Drawings and other documentation.
 - (b) As units of equipment are retired or irreparably damaged and need to be replaced, the Contractor shall provide the Employer with a modified list or report showing all replaced and replacement units, to the same level of detail required above.
 - (c) As staff are retired or dismissed from employment and need to be replaced, the Contractor shall provide the Authority with a modified list or report showing all replaced and replacement staff, to the same level of detail required above.
 - (d) As procedures and organization changes, update and replace any manuals specified above (Section 18.4)
- 14.9. Regarding Registrations, Permits and Taxes, the Contractor shall provide to the Employer proof:
- (a) of payment of all taxes, municipal taxes and fees, insurances dues,
 - (b) of vehicle registration,
 - (c) of vehicle road-worthiness and adequacy of emissions control,
 - (d) of the Contractor's registration,
 - (e) of Contractor's payment of income taxes each year, and
 - (f) of holding any essential permits.
- 14.10. The Contractor shall also establish and operate a telephone line with a full time answering service or machine at the said office for receipt of complaints and public comments. Said office shall have at least one responsible person in charge who shall be present during Service hours. The office shall also operate an E-mail account.

A complete log of all communications shall be maintained, including a record of actions to follow-up on any complaints or comments. The Contractor shall make the log and record available for inspection whenever requested by the Employer. The log shall be synchronized once a month with the log of the Employer. The Contractor shall respond to all complaints regarding Services provided under this Agreement in a courteous and prompt manner within three (3) service days. The Contractor shall apply an IT system, which is able to communicate with the Employer, in order to allow for rapid exchange of data, required under the terms and conditions of this Agreement. An online connection will allow for fast processing.

The data shall be organized in a data-base or information system structure for fast access in case of queries of the Employer.

The information system shall also include the complaint log.

Appendix A - QUALITY STANDARD OF MSW BEING LANDFILLED

Quality characteristics	Quality requirements
Waste Types	Municipal Solid Waste (MSW) including Commercial and Institutional Waste
	No agricultural waste; sewage sludge; old and abandoned cars; slaughterhouse waste; infectious and hazardous medical waste; construction and demolition waste; industrial hazardous waste; radioactive waste; explosives; etc.
	No Animal Carcasses, Fish Waste or any other obnoxious and environmentally hazardous materials.
Physical Parameters	To be appropriate to ensure stability of landfill body and high density compaction after emplacement
	Light material to be compacted or wrapped to prevent wind-blown emissions
	Dry material to be packed in bags to avoid dust emissions

Appendix B - ENVIRONMENTAL GUIDELINES FOR THE DESIGN AND OPERATION OF SANITARY LANDFILLS

المعايير التوجيهية البيئية من أجل تخطيط، بناء، وتشغيل المطامر الصحية للنفايات الصلبة التي أعدتها وزارة البيئة

I - DESIGN REQUIREMENTS

The Ministry of Environment approves, from the environmental point of view, the design of landfills (defined in article 1) after giving its approval on the relevant environmental impact assessment studies, provided it makes sure that all the corrective measures suggested in the environmental impact assessment studies as well as the design requirements for sanitary landfills (defined in article 2) have been taken into consideration.

Article One

Definition of sanitary land filling and sanitary landfills

1-1 Land filling

It is the eco-friendly means of getting rid of solid domestic waste which cannot be managed in another way and which resulted from the refuses of recycling, composting, burning, and other operations related to solid domestic waste. Landfilling is one of the essential elements in any strategy and plan aiming at achieving an integrated solid domestic waste environmental management.

1-2 Landfills

They are the lands or special land, set areas used to dispose of waste resulted from the refuses of recycling, composting, burning, and other operations related to solid household waste. After designing it and equipping with the suitable technical and engineering devices, these landfills can receive the waste, shrink its volume and cover it with a sand layer regularly without causing any negative impacts on the environment, health, and public safety.

Article Two

Landfills design requirements

According to the Ministry of Environment's solid domestic waste management strategy, the design of a sanitary landfill requires that:

2-1 *The landfill capacity be large enough to receive the volume of the waste resulting from the area population served by the landfill, for thirty years, taking into consideration the following points:*

2-1-1 *Demographic growth during that period which increases solid domestic waste quantity, in addition to the changes in commercial, industrial, and touristic activity in the area.*

- 2-1-2 *Quality of the waste to be land filled resulted from the different stages and elements of the solid domestic waste management plan in the area. (Sorting, composting...)*
- 2-1-3 *Quantity of daily-required soil for covering, as well as the final top isolating layer.*
- 2-1-4 *Reduction of the different layers of the landfill due to the decomposition and the compression of the landfilled waste caused by the weight of layers above it.*
- 2-2 *The landfill be designed in a way to ensure the isolation of its floors so the leachate resulting from the decomposition of the waste can be gathered and prevented from leaking to underground and surface water. The landfill floor-isolating liner should be composed of a clay liner, covered by HDPE membrane liners, a cushion liner, and a high permeability layer.*
 - 2-2-1 *Clay liner: many tests must be carried out to determine the permeability of the isolating clay liner, the best moisture level, the required pressure to compress this layer, and its pitch level, before adopting it in order to ensure a permeability speed less than 10^{-7} /sec. This liner should be placed on compacted bedrock of more of 3-meter thickness.*
 - 2-2-2 *Membrane liners: they must be compatible with the nature of landfilled waste to prevent leachate leaking through it. Its effectiveness must not be affected by the chemical characteristics of that leachate and of the waste quality.*
 - 2-2-3 *Cushion liner to protect the above mentioned membrane liner.*
 - 2-2-4 *High permeability layer usually composed of basalt.*
- 2-3 *The landfill design shall be based on cell system. That way, the work will be done gradually and/or according to the type of the landfilled waste. This is aimed to organize work in the landfill according to the suggested design, to facilitate monitoring of land filling and to calculate the remaining life of the landfill to compare it to the original timetables accordingly any deviation will be subject to corrective measures.*
- 2-4 *Design a complete management system for the leachate resulting from waste decomposition and polluted rainwater, entitling collection till treatment, it should include the following equipment:*
 - 2-4-1 *Perforated pipes (with 1% incline) placed on the membrane layers with the suitable incline (2-4%) at their lowest level to ensure the leachate flowing in the pipes and reaching the collection tanks.*
 - 2-4-2 *A treatment station designed to treat the leachate and ensure that the characteristics of water -once treated- comply with the national environment standards.*
 - 2-4-3 *Underground wells fitted in the landfill area to determine underground water quality prior to operating the landfill, to monitor any landfill leakage towards them, and to ensure that underground water characteristics remain in agreement with the ones set before landfill exploitation. The number, position, and depth of the wells are to be*

determined according to the landfill's location and geological and hydrogeological nature.

- 2-5 *Design a management system of the gases resulting from the decomposition of the organic material present in the waste, entailing the collection recapture and/or burning of gases avoid any explosions due to the increase of methane concentration beyond the allowed limit, in addition to avoid any damage that this gas causes to the environment. The gas management system shall depend on the following type of equipment and methods:*
- 2-5-1 *Suitable engineering methods (isolating layers) inside the landfill in a way to prevent gas dispersion into the lands surrounding the landfill.*
- 2-5-2 *Perforated pipes that allow the capturing of the gas and conveying it to the landfill rooftop through an exhaust.*
- 2-5-3 *A gas burner or a gas collection and purification system.*
- 2-5-4 *Probes set within the landfill surroundings to monitor gas outflow from the landfill to the surrounding lands.*
- 2-6 *The final use of the landfill following its closure is to be set in addition to the design of its upper layer. This should be done through studying of the landfill location and its original surroundings nature enabling to define the kind of plants that can be planted in it and the kinds of animals which can survive in that area. After that, a final use proposal should be set provided it will be composed of the following items:
Isolating layer, agricultural soil layer, rainwater and running water draining system.*
- 2-6-1 *The isolating layer aims at stopping or reducing rainwater leaking to filled waste. It is composed of two parts:*
- *Part one: membrane liners placed on the sand layer that covers the last layer of landfilled waste*
 - *Part two: clay liner, 60 to 100 cm thick, placed above the above mentioned membrane liner*
- 2-6-2 *The agricultural soil layer, which is the soil layer, placed on the top of the landfill to make it cultivable. It is composed of two parts:*
- *A 30-cm thick sand layer placed directly over the above-mentioned clay liner (an additional membrane layer can be placed to separate this layer from the clay liner)*
 - *Agricultural soil layer, no less than 70-cm thick, whose characteristics are in agreement with the characteristics of the agricultural soil surrounding the landfill.*
- 2-6-3 *Rainwater drainage system: it relies on providing suitable inclines in the landfill's final upper layer. The inclines allow rainwater to flow into aqueducts built in the lower levels of the inclined layers and to lead it to nearby winter water aqueducts or to special tanks in order to be collected when necessary.*
- 2-7 *The required infrastructure for the landfill's functioning be designed, such as:*

2-7-1 *Inner roads: their width, incline... in a way suiting the used trucks and the expected work rate.*

2-7-2 *Rainwater and water drainage networks*

2-7-3 *Leachate treatment plant*

2-7-4 *Balance for trucks: suiting the type of trucks used or might be used.*

2-7-5 *Building(s) of the management, guards, restrooms, and other...*

2-8 *The surrounding of the real estate shall be tree-planted as well as the roads leading to and from the landfill.*

Article Three

The Ministry of Environment studies the complete submitted during a 15 working day period and informs the side responsible for the file about its notes in order that they can be modified it as required before construction of the landfill takes place.

Article Four:

The party responsible for the establishment of the landfill pledges not to adopt any major change in the design approved by the Ministry of Environment, before getting new approval.

Article Five:

The Ministry of Environment reserves its right to perform regular monitoring throughout the establishment of the landfill and to ask for the modifications that it deems necessary to safeguard the environment and preserve natural resources.

II - OPERATION REQUIREMENTS

The Ministry of Environment approves, from the environmental point of view, the establishment and operation of sanitary landfills (defined in article 1) in view of safeguarding the environment, preserving natural resources and limiting the impact of pollutants generated by those landfills (defined in article 2), through the implementation of certain environmental guidelines (detailed in article 3)

Article One:

Definition of land filling and landfills

1-1 Land filling

It is the eco-friendly means of getting rid of solid domestic waste which cannot be managed in another way and which resulted from the refuses of recycling, composting, burning, and other operations related to solid domestic waste. Landfilling is one of the essential elements in any strategy and plan aiming at achieving an integrated solid domestic waste environmental management.

1-2 Landfills

They are the lands or special land, set areas used to dispose of waste resulted from the refuses of recycling, composting, burning, and other operations related to solid household waste. After designing and equipping it with the suitable technical and engineering devices, these landfills can receive the waste, shrink its volume it with a sand layer regularly without causing any negative impacts on the environment, health, and public safety.

Article Two:

Definition of general pollutants resulting from the operation of sanitary landfills

The operation of sanitary landfills produces the following waste:

- 2-1 Liquid waste.** *It is the leachate resulting from the degradation of landfilled solid domestic waste itself, in addition to polluted rainwater due to its mixing with landfilled solid waste. The liquid waste contains dissolved organic materials, suspended solid materials, and characterized by high biological and chemical demand for oxygen, and a variation in the Ph. It comes also from oil and greases resulting from machines, equipment's and power generators maintenance.*
- 2-2 Solid waste,** *basically waste which is not allowed to be landfilled (i.e. hazardous waste)*
- 2-3 Air pollution:** *a mix of gases resulting from the decomposition of the organic material in waste in anaerobic conditions. This mixture mainly contains methane and carbon dioxide. In addition, dust is produced from the daily covers used in the landfill as well as combustion gases from machines, equipment, and power generators used.*

- 2-4 *Noise pollution. It results from the machines and equipment used in the landfill and liquid waste treatment plant, and from power generators and truck movement from and to landfill site.*

Article Three:

Required general environmental guidelines in operation sanitary landfills

3-1 *Water management*

- 3-1-1 *Rationalizing water usage to maintain the sustainability of water resources*

3-2 *Liquid Water management*

- 3-2-1 *Ensure no liquid waste leakage into nature and surface and underground waterways*
- 3-2-2 *Providing a closed and independent tank to drain liquid waste resulting from the landfill and handle it in a way that guarantees that its characteristics once treated-comply with the national environmental standards.*
- 3-2-3 *Draining treated water into the sea or surface water, the flow of which is no less than 0.1m³/sec according the national environmental standards. When impossible, supply the Ministry of the Environment with a document that sets the water-disposal method in order to discuss it and get approval for it before applying it.*
- 3-2-4 *Construct underground wells in the landfill area to determine underground water quality prior to operating the landfill, to monitor any landfill leakage towards them, and to ensure that underground water characteristics remain in agreement with the ones set before landfill exploitation.*
- 3-2-5 *Running regular tests on samples taken from treated liquid waste and from surface and underground water, as follows:*
- *After treating liquid waste:* ***Test Frequency:*** every three (3) months
Indications that should be monitored: the biological and chemical demand for oxygen, PH, dissolved material, suspended solid material.
 - *Surface and underground water:* ***Test Frequency:*** every six (6) months
Indications that should be monitored: the biological and chemical demand for oxygen, PH, suspended solid material.
- 3-2-6 *Keeping clear records showing test results of the different samples of liquid waste before and after treatment, and of underground and surface water.*

- 3-2-7 *Providing the Ministry of Environment with regular tests of different sample results to monitor the extent of the compliance of its characteristics with national environmental standards.*
- 3-2-8 *Taking all suitable corrective measures when any error in the tests mentioned in paragraph 3-2-5 appears after taking the approval of the Ministry of Environment*
- 3-2-9 *Collecting greases and oil resulting from the maintenance of used power generators, machines and equipment in closed special containers in preparation for its delivery to the recycling sites.*

3-3 Solid waste management

- 3-3-1 *Receiving solid domestic waste in well-packed bails and in closed containers to prevent waste falling and dispersing.*
- 3-3-2 *Monitoring a representative number of packed solid waste before land filling it in order to check that it does not contain unauthorized waste to be land filled (i.e. hazardous waste)*
- 3-3-3 *Notifying the Ministry of Environment of any waste unauthorized to be land filled, especially hazardous waste, so that its quality, the responsible sender, and the eco-friendly way to dispose of it can be determined.*

3-4 Air pollution management

- 3-4-1 *Fitting a management system of the gases resulting from the decomposition of the organic material present in the waste, in order to collect them, recapture them, or burn them using the proper technical methods which guarantee the compliance of its characteristics with national environmental standards.*
- 3-4.2 *Fitting the landfill with suitable engineering methods (isolating layers) in a way to prevent gas leakages in addition to ensure that domestic solid wastes are covered with a sand layer of an adequate thickness to prevent the dispersion of gases that cause foul odors.*
- 3-4-3 *Fitting the landfill with probes to monitor gas leakage from the landfill into nearby lands.*
- 3-4-4 *Monitoring methane concentration level in the air to ensure of the efficiency of the gas management system mentioned in paragraph 3-2-1*
- 3-4-5 *Tree-planting the landfill area with tall forest trees that go with the nature of the area to isolate odors and dusts from the landfill's outer surroundings.*
- 3-4-6 *Asphalting the roads leading to the landfill and showering them regularly with water to prevent the spreading of dusts due to the running trucks and vehicles.*

3-4-7 Placing power generators in closed special rooms and fitting their exhausts with filters that guarantee the compliance of their emission characteristics with national environment standards.

3-4-8 Maintaining trucks and vehicles engines regularly to ensure efficient combustion of fuel.

3-4-9 Compliance of air pollutant characteristics with national environment standards.

3-5 Noise pollution management

3-5-1 Fitting machines that are considered noise polluting with mufflers and placing them in soundproof rooms as well as maintaining them constantly.

3-5-2 Fitting the power generator with a muffler that guarantees the compliance of the resulting noise level characteristics with national environmental standards.

3-6 Other general conditions

3-6-1 Ensure the appropriate quantities of soil used in the daily coverage process, in a way to guarantee the isolation of the waste layer and its compliance with the design requirements;

3-6-2 Provide workers and technicians with the proper personal protection equipment (masks, special clothes, proper shoes);

3-6-3 Prohibit smoking and put warning signs against it;

3-6-4 Applying sound environmental practices continuously;

Article Four:

The Ministry of Environment specifies the final required environmental guidelines for the operation of landfills based on the location of each site, the adopted processing stages and the produced pollutants (through modification of certain conditions stated in article 3)

Article Five:

The Ministry of Environment reserves its right to impose additional environmental guidelines when needed and to perform regular monitoring to verify the continuous implementation of the required environmental guidelines.

Conditions of Contract

Appendix 1

Safety, Health and Environmental Regulations

Appendix 1

Safety, Health and Environmental Regulations

Table of Contents

1	INTRODUCTION	3
2	COMPLIANCE WITH REGULATIONS.....	3
3	FAILURE TO COMPLY WITH REGULATIONS.....	5
3.1	GENERAL	5
3.2	DEDUCTIONS FROM PAYMENTS	5
4	GENERAL REQUIREMENTS.....	6
4.1	PREAMBLE	6
4.2	SAFETY OFFICER.....	6
4.3	SAFETY TRAINING	6
4.4	SAFETY MEETINGS.....	7
4.5	SAFETY INSPECTIONS	7
4.6	CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH	7
4.7	POTENTIAL HAZARDS.....	7
4.8	ACCIDENT REPORTING.....	7
4.9	NOTICES, SIGNS, ETC	8
4.10	FIRST AID AND MEDICAL ATTENTION.....	8
4.11	EMPLOYEE QUALIFICATIONS AND CONDUCT	8
4.12	SECURITY	8
5	SAFETY REQUIREMENTS.....	9
5.1	PERSONAL PROTECTIVE EQUIPMENT	9
5.2	FIRE PROTECTION AND PREVENTION	9
5.3	ELECTRICAL SAFETY	11
5.4	OXYGEN/ACETYLENE/FUEL GASES/CARTRIDGE TOOLS	12
5.5	SCAFFOLDING/TEMPORARY WORKS	12
5.6	USE OF LADDERS	12
5.7	ELEVATED WORK	13
5.8	USE OF TEMPORARY EQUIPMENT.....	14
5.9	LOCKING-OUT, ISOLATING, AND TAGGING OF EQUIPMENT.....	15
5.10	INSTALLATION OF TEMPORARY OR PERMANENT EQUIPMENT	16
5.11	LASER SURVEY INSTRUMENTS	16
5.12	WORKING IN CONFINED SPACES	16
5.13	DEMOLITION	16
5.14	USE OF EXPLOSIVES	17
5.15	EXCAVATION AND TRENCHING.....	18
5.16	CONCRETE REINFORCEMENT STARTER BARS	19
6	ENVIRONMENTAL AND HEALTH REQUIREMENTS.....	19
6.1	PROTECTION OF THE ENVIRONMENT	19
6.2	AIR POLLUTION	19
6.3	WATER POLLUTION	19
6.4	SOLID WASTE.....	19
6.5	NOISE CONTROL	20
6.6	PROTECTION OF ARCHAEOLOGICAL AND HISTORICAL SITES	21
7	ADDITIONAL REQUIREMENTS FOR WORK IN PUBLIC AREAS	21
7.1	GENERAL	21
7.2	METHOD STATEMENT	22

7.3	CLOSURE OF ROADS, ETC	23
7.4	TRENCH AND OTHER EXCAVATIONS	23
7.5	SAFETY BARRIERS	24
8	CONTRACTOR'S SITE CHECK LIST	25
9	PROTECTION OF OTHER PROPERTY AND SERVICES.....	25
	ANNEX 1 - SAMPLE EXCAVATION PERMIT	30
	ANNEX 2 - SAMPLE STREET CLOSURE PERMIT	31
	ANNEX 3 - SAMPLE CONTRACTOR'S SITE CHECK LIST	32

Part I

General Safety, Health and Environmental Regulations

1 Introduction

- 1.1 The prevention of injury and/or illness to site personnel and the public, damage to the Works and to public and private property, protection of the environment, and compliance with applicable laws, are primary objectives of the Employer (the Employer). Because of the importance the Employer places on meeting these objectives, selected minimum requirements are outlined in these Safety, Health and Environmental Regulations with which Contractors shall comply while working on the Employer's contracts. Given that these Regulations cannot cover every eventuality, the Contractor shall be expected to exercise good judgment in all such matters, even though not mentioned in these Regulations, and shall take any and all additional measures, as required or necessary, to meet his responsibility for safety, health and environmental matters during the period of the Contract.

The Employer and its representatives shall not be held liable for any actions taken by the Contractor that are attributed to following the minimum requirements stated hereinafter.

- 1.2 The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:
- (a) have full regard for the safety of all persons on the Site and keep the Site and the Works in an orderly state appropriate to the avoidance of danger to any person;
 - (b) know and understand all laws governing his activities along with any site requirements and work site hazards. Such information shall be communicated by the Contractor to his personnel and subcontractors;
 - (c) take all necessary measures to protect his personnel, the Employer's personnel, other persons, the general public and the environment;
 - (d) avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of carrying out the Works.
 - (e) ascertain and comply with any regulations concerning noise, pollution and other nuisance in addition to the obligations imposed by the Conditions of Contract and by law.
 - (f) take necessary precautions to prevent nuisance from smoke, dust, rubbish, water, polluted effluent and other causes.

2 Compliance with Regulations

- 2.1 The Contractor shall comply with the requirements of these Safety, Health and Environmental Regulations and all other applicable regulations or requirements under Lebanese laws, laid down by relevant authorities or issued by the Employer or the Engineer concerning safety, health and the environment, in force or introduced or issued from time to time during the period of the Contract.

In so far as these Regulations are applicable, they shall apply to sites and personnel outside the Site associated with the performance of the Contract.

- 2.2 The Regulations equally apply to subcontractors and all other parties engaged by the Contractor and their personnel. The Contractor shall ensure all such parties are fully aware of and comply with the Regulations.
- 2.3 The Contractor shall comply with all notifications and written or verbal instruction regarding safety issued pursuant to these Regulations by the Employer, Engineer or relevant authorities within the time specified in the notification or instruction.

Whenever the Contractor is required to obtain the approval, agreement, permission, etc of the Engineer, such approval, agreement, permission, etc shall not relieve the Contractor of his responsibilities and obligations under these Regulations or the Contract.

- 2.4 The Contractor shall adopt a positive approach, awareness and responsibility towards safety, health and the environment, and take appropriate action, by:
- (a) ensuring the Regulations are enforced and followed by the Contractor's personnel. Any failure by the Contractor's personnel to follow the Regulations, shall be regarded as a failure by the Contractor.
 - (b) paying attention to possible injury to unauthorized persons entering the site, particularly children.
- 2.5 Whenever in these Regulations the Contractor is required to provide test certificates for equipment and personnel or to comply the relevant authorities' requirements and no independent test facilities are available or no relevant authorities exist in Lebanon, the Contractor shall provide:
- a) in lieu of independent test certificates:
 - for equipment - details of the tests and the date of the tests that have been carried out by the Contractor and a written statement that the Contractor has satisfied himself that the item of equipment is fit and safe for use;
 - for personnel - details of the training and experience and a written statement that the Contractor has satisfied himself that the person has the required level of competency;
 - b) in lieu of relevant authorities' requirements - details of the Contractor's own rules, regulations, requirements and procedures regarding safety, health and the environment.

If the Engineer is dissatisfied with the details provided by the Contractor, the Contractor shall provide further details or carry out further tests or provide further written statements as may be reasonably required by the Engineer.

When the Engineer has satisfied himself regarding the Contractor's own rules, regulations, requirements and procedures provided in accordance with (b) above, such rules, etc shall be deemed to form part of these Regulations and to which Clause 3 shall equally apply.

3 Failure to Comply with Regulations

3.1 General

3.1.1 Should the Contractor fail to comply with any of the Regulations or requirements:

- (a) the Engineer may suspend the Works or part of the Works until the Contractor has taken necessary steps, to the satisfaction of the Engineer, to comply with the regulations or requirements.
- (b) the Employer may, following written notice to the Contractor, carry out themselves or arrange for another contractor to carry out such measures as they consider appropriate on behalf of the Contractor. Any such actions by the Employer shall not affect or diminish the Contractor's obligations or responsibilities under the Contract.
- (c) the Engineer may, following written notice to the Contractor, deduct from payments to the Contractor the amounts stipulated in Sub-Clause 3.2. Such notice shall specify:
 - (i) the nature of the failure or failures;
 - (ii) the period after the date of the notice within which the Contractor shall remedy each failure; and
 - (iii) the amount to be deducted.

Such suspension of payment will remain in force until such time as the Contractor has rectified the breach or breaches to the satisfaction of the Engineer. No interest shall be paid on the suspended payments.

3.1.2 Failure to comply with the Regulations or requirements shall be considered a breach of contract by the Contractor and may result in termination of the Contract by the Employer.

3.1.3 In the event of the Employer or Engineer taking action based on Sub-Clause 3.1.1(a) or (b) or 3.1.2, the Contractor shall not be entitled to any additional costs or extension to the Contract Completion Date.

3.1.4 All costs incurred by the Employer pursuant to Sub-Clause 3.1.1(b) and the deductions from payments imposed on the Contractor by the Engineer under Sub-Clause 3.1.1(c) shall be deducted from amounts otherwise due to the Contractor.

3.2 Deductions from Payments

3.2.1 Failures by the Contractor to comply with the Regulations or requirements are classified as follows:

D1 - breaches of Sub-Clause 5.6 (personal protective equipment);
D2 - breaches of Clause 7 (work in Public Areas);
D3 - breaches other than D1 and D2.

3.2.2 The basic deduction from payment for each classification in Sub-Clause 3.2.1, is as follows:

for D1 – USD 100/person/day;
for D2 – USD 500/location/day;
for D3 – USD 100/occurrence/day.

Limit of cumulative total deductions shall not exceed 1% of Contract price.

3.2.3 Deductions from payments will be applied as follows:

- (a) for the first breach of each regulation or requirement - the basic deduction. If the same or similar breaches occur in different situations or locations at the same time, the Engineer may apply deductions for each situation or location; this will not apply to breaches related to personal protective equipment.
- (b) for a second or subsequent breach of the same Regulation or requirement or failure to rectify a previous failure within the time specified by the Engineer - twice the basic deduction.

4 General Requirements

4.1 Preamble

- 4.1.1 All references to safety shall be deemed to include health and the environment.

4.2 Safety Officer

- 4.2.1 The Contractor shall appoint a competent Safety Officer who shall be responsible for safety, health and the environment. The Safety Officer shall be given sufficient time by the Contractor to carry out his duties; minimum requirements shall be as follows:

Workforce on Site of over 250 - full time Safety Officer;

Workforce on Site of 100-250 - 50% of Safety Officer's time;

Workforce on Site below 100 - as required for the Works but a minimum of 5 hours per week of Safety Officer's time where more than 20 workers.

- 4.2.2 The Contractor shall provide the Safety Officer with appropriate identification, including a white hard hat with red cross symbol and an identification badge. The appointment of the Safety Officer shall be in writing and copied to the Engineer. The appointment shall include specific instructions to enforce these Regulations and delegated authority to take any action, measure or to issue instructions regarding their enforcement. All persons on Site shall be made aware of the name and authority of the Safety Officer and instructed to comply with any instruction or direction on safety matters, verbal or in writing, issued by the Safety Officer.

- 4.2.3 The Safety Officer shall be provided with a mobile phone or other similar means of communication. The Safety Officer shall be accessible and available at all times including outside normal working hours.

4.3 Safety Training

- 4.3.1 The Contractor shall provide safety induction training for all site personnel upon starting on site.
- 4.3.2 The Contractor shall provide safety refresher/reinforcement training at regular intervals for his staff.

4.4 Safety Meetings

- 4.4.1 The Contractor shall hold regular safety meetings to provide safety instructions and receive feedback from site personnel on safety, health and environmental matters. A weekly Safety Meeting shall be chaired by the Safety Officer and minutes shall be taken of the meeting. The meeting/minutes shall cover all relevant issues including actions to be taken. A copy of the minutes shall be given to the Engineer. The Safety Officer should attend the Contractor's weekly site meetings and "Safety" should be an item on the agenda.

4.5 Safety Inspections

- 4.5.1 The Safety Officer shall make regular safety inspections of the work site. The Safety Officer shall prepare a report of each inspection. This report shall include details of all breaches of these Regulations and any other matters or situations relating to safety found during the inspection, instructions issued by the Safety Officer and actions taken by the Contractor. A copy of the Safety Officer's inspection reports shall be given to the Engineer.

4.6 Control of Substances Hazardous to Health

- 4.6.1 Hazardous materials shall be stored in approved safety containers and handled in a manner specified by the manufactures and/or prescribed by relevant Authorities (see Sub-Clause 2.5).
- 4.6.2 Only properly trained and equipped personnel shall handle hazardous materials.

4.7 Potential Hazards

- 4.7.1 The Contractor shall inform employees of potential hazards, take appropriate steps to reduce hazards and be prepared for emergency situations.
- 4.7.2 The Contractor shall make an assessment of every operation involving hazardous substances. The assessment shall be recorded on a Hazardous and Flammable Substances Assessment Method Statement which shall be submitted to the Engineer prior to the delivery and use of the substance on Site.

4.8 Accident Reporting

- 4.8.1 The Contractor shall report all accidents and dangerous occurrences to the Engineer. The Contractor shall prepare a report on each accident or dangerous occurrence and a copy of the report, together with witness statements and any other relevant information, shall be submitted to the Engineer. A reportable accident or dangerous occurrence shall include any accident to any person on Site requiring medical attention or resulting in the loss of working hours or any incident that resulted, or could have resulted, in injury, damage or a danger to the Works, persons, property or the environment.
- 4.8.2 In the event of an accident or dangerous occurrence, the Contractor shall be responsible for completing all statutory notifications and reports. Copies of all statutory notifications and reports shall be passed to the Engineer.
- 4.8.3 All accidents and dangerous occurrences shall be recorded in a Site Accident Book. The Site Accident Book shall be available at all times for inspection by the Engineer.
- 4.8.4 The Contractor shall immediately rectify any situation or condition that could result in injury, damage or a danger to the Works, person, property or the environment. If the situation or condition cannot be corrected immediately, the Contractor shall provide temporary barriers

and appropriate warning signs and devices and/or take other appropriate action necessary for the protection of persons, property and the environment.

4.9 Notices, Signs, Etc

- 4.9.1 All safety, health, environmental and other notices and signs shall be clearly displayed and written in both Arabic and either English or French. All requirements, instructions, procedures, etc issued by the Contractor concerning these Regulations shall be printed in both Arabic and English and displayed and readily available to Contractor's personnel.

4.10 First Aid and Medical Attention

- 4.10.1 The Contractor shall have comprehensive First Aid Kit(s) on Site at all times. First Aid Kits shall be conveniently located and clearly identifiable.
- 4.10.2 The Contractor shall have one employee on site trained in first aid for every 25 employees. Such persons shall be provided with appropriate identification, including a red hard hat with a white "red cross" symbol and an identification badge.
- 4.10.3 The Contractor shall make contingency arrangements for calling a Doctor and transporting injured persons to hospital. The telephone numbers of the emergency services and the name, address and telephone number of the Doctor and nearest hospital shall be prominently displayed in the Contractor's site office.

4.11 Employee Qualifications and Conduct

- 4.11.1 The Contractor shall employ only persons who are fit, qualified and skilled in the work to be preformed. All persons shall be above the minimum working age.
- 4.11.2 Contractor's personnel shall use the toilet facilities provided by the Contractor.
- 4.11.3 The Contractor shall ensure:
- (a) that no firearms, weapons, controlled or illegal substances or alcoholic beverages are brought onto the Site and that no personnel under the influence of alcohol or drugs are permitted on Site.
 - (b) that all personnel obey warning signs, product or process labels and posted instructions.
 - (c) that drivers or operators of vehicles, machinery, plant and equipment follow the rules for safe operations. Drivers shall wear seat belts and obey all signs and posted speed limits.

4.12 Security

- 4.12.1 The Contractor shall take all measures necessary, including watching and lighting at night, to prevent unauthorized entry to the Site and to safeguard the Site, the Works, materials, Plant, Contractor's Equipment and Temporary Works against damage from trespass and theft.

5 Safety Requirements

5.1 Personal Protective Equipment

- 5.1.1 The Contractor shall provide personal protective equipment, including hard hats, safety glasses, respirators, gloves, safety shoes, and such other equipment as required, and shall take all measures or actions for the protection and safety of Contractor's personnel.
- 5.1.2 Non-metallic hard hats shall be worn at all times by all personnel at the worksite with the exception of those areas where the Engineer has indicated it is not necessary to do so.
- 5.1.3 Safety glasses shall meet international standards and be available for use and worn in specified worksite areas. As a minimum, safety glasses shall be worn for the following types of work: hammering, chipping, welding, grinding, use of electrically powered or pneumatic equipment, insulation handling, spray painting, working with solvents, and other jobs where the potential of an eye injury exists. Face shields and/or monogoggles shall be worn where possible exposure to hazardous chemicals, cryogenic fluids, acids, caustics, or dust exists and where safety glasses may not provide adequate protection.
- 5.1.4 When handling acids, caustics, and chemicals with corrosive or toxic properties, suitable protection, such as acid suits or chemical resistant aprons and gloves, shall be worn to prevent accidental contact with the substance.
- 5.1.5 Personnel shall not be permitted to work whilst wearing personal clothing or footwear likely to be hazardous to themselves or others.
- 5.1.6 The wearing of safety shoes with steel reinforced toes is recommended for all Contractor's personnel on site. In all cases, Contractor's personnel shall wear substantial work shoes that are commensurate with the hazards of the work and the worksite area.
- 5.1.7 Hearing protection, including muffs, plugs or a combination thereof, shall be provided for all personnel operating in areas where the noise level exceeds 90 decibels. Such protection shall also be provided for operators working with equipment exceeding such a level. This may include equipment such as excavators, shovels, jackhammers, saws, drills, grinders, and the like are being used.
- 5.1.8 The Contractor shall encourage employees to wear substantial work gloves whenever practical and safe to do so.

5.2 Fire Protection and Prevention

- 5.2.1 The Contractor shall take all necessary measures to prevent personal injury or death or damage to the Works or other property, including but not limited to
 - (a) provision of fire fighting facilities in all vulnerable areas and as instructed by the Engineer
 - (b) marking escape routes and illuminating them if necessary
 - (c) instructing workmen in fire precautions and use of fire fighting equipment
 - (d) displaying notices on fire safety and procedures in the event of a fire on Site.
- 5.2.2 The Contractor shall comply with fire protection instructions given by the Authorities having jurisdiction in regard to fire protection regulations.
- 5.2.3 The Contractor shall, upon moving on site, provide to the Engineer and the Authorities a fire prevention and evacuation plan. This shall include drawing(s) showing the fire assembly

points. The fire prevention and evacuation plan and drawing(s) shall be updated from time to time as the Works progress. The Contractor shall ensure all personnel are fully informed on escape routes and assembly points and any changes thereto.

- 5.2.4 Fuel storage will not be permitted in construction work areas. Contractors may establish fuel storage tanks in special areas set aside for the purpose and approved by the Engineer. Storage tanks shall be adequately bounded to control spillage. Fire extinguishers shall be provided and installed in a suitable nearby location.
- 5.2.5 Highly combustible or volatile materials shall be stored separately from other materials and as prescribed by relevant authorities and under no circumstances within buildings or structures forming part of the permanent Works. All such materials shall be protected and not exposed to open flame or other situations which could result in a fire risk.
- 5.2.6 No combustible site accommodation shall be located inside or within 10 meters of a building or structure forming part of the permanent Works. Where units have to be used in these circumstances, they shall be constructed of non-combustible materials and have a half-hour fire rating inside to outside and outside to inside. Non-combustible furniture shall be used where practical.
- 5.2.7 All temporary accommodation and stores shall be provided with smoke detectors and fire alarms.
- 5.2.8 Smoking shall be banned in high-risk areas.
- 5.2.9 Expanded polystyrene with or without flame retarding additive, polythene, cardboard and hardboard shall not be used as protection materials.
- 5.2.10 Plywood and chipboard shall only be used as protection on floors. Vertical protection shall be non-combustible. Debris netting and weather protection sheeting shall be fire retardant.
- 5.2.11 When using cutting or welding torches or other equipment with an open flame, the Contractor shall provide a fire extinguisher close by at all times. All flammable material shall be cleared from areas of hot works, or work locations prior to welding or oxy/gas burning operations. All hot works shall cease half an hour before the end of a work shift to allow for thorough checking for fires or smoldering materials. Where appropriate, areas of hot works are to be doused in water before the shift ends.
- 5.2.12 An adequate number of fire extinguishers of types suited to the fire risk and the materials exposed shall be provided. These shall be placed in accessible, well-marked locations throughout the job site. Contractor's personnel shall be trained in their use. Extinguishers shall be checked monthly for service condition and replaced or recharged, as appropriate after use.
- 5.2.13 Only approved containers shall be used for the storage, transport and dispensing of flammable substances. Portable containers used for transporting or transferring gasoline or other flammable liquids shall be approved safety cans.
- 5.2.14 Fuel burning engines shall be shut off while being refueled
- 5.2.15 Adequate ventilation to prevent an accumulation of flammable vapors shall be provided where solvents or volatile cleaning agents are used.
- 5.2.16 Flammables shall not be stored under overhead pipelines, cable trays, electrical wires, or stairways used for emergency egress.

- 5.2.17 Paints shall be stored and mixed in a room assigned for the purpose. This room shall be kept under lock and key.
- 5.2.18 Oily waste, rags and any other such combustible materials shall be stored in proper metal containers with self-closing lids and removed every night to a safe area or off site. Every precaution shall be taken to prevent spontaneous combustion.

5.3 Electrical Safety

- 5.3.1 All temporary electrical installations, tools and equipment shall comply with current regulations dealing with on-site electrical installations.
- 5.3.2 The Contractor shall establish a permit-to-work system for work on or in proximity to energized circuits of any voltage. Contractor's personnel shall not commence work on such circuits unless a permit to work has been issued and adequate safety measures have been taken and the work operation has been reviewed and approved by the Engineer.
- 5.3.3 Only authorized personnel shall be allowed to work or repair electrical installations and equipment.
- 5.3.4 Portable tools and equipment shall be 220 volt, unless otherwise agreed by the Engineer.
- 5.3.5 When portable or semi-mobile equipment operates at voltages in excess of 110 volts, the supply shall be protected by a Residual Current Device (RCD) regardless of any such device fitted to the equipment. The RCD must have a tripping characteristic of 30 milliamps at 30 milliseconds maximum.
- 5.3.6 All static electrically powered equipment, including motors, transformers, generators, welders, and other machinery, shall be properly earthed, insulated, and/or protected by a ground fault interruption device. In addition, the skin of metal buildings and trailers with electric service shall be earthed. Metal steps, when used, shall be securely fixed to the trailer.
- 5.3.7 Lamp holders on festoon lighting shall be molded to flexible cable and be of the screw in type. Clip on guards shall be fitted to each lamp unit.
- 5.3.8 All tungsten-halogen lamps shall be fitted with a glass guard to the element. These lamps must be permanently fixed at high level.
- 5.3.9 Electrical equipment shall be periodically inspected and repaired as necessary by competent persons.
- 5.3.10 Any work on electrical equipment and systems shall be made safe through locking, tagging, and/or isolation of the equipment before work commences. Prior to the start of the work, the equipment or systems shall be tested to insure that they have been properly de-energized and isolated.
- 5.3.11 Electrical repair work on energized systems shall be avoided whenever possible.
- 5.3.12 Electrical troubleshooting shall be conducted only after getting written approval of the Engineer.
- 5.3.13 Unauthorized personnel shall not enter enclosures or areas containing high voltage equipment such as switchgear, transformers, or substations.

5.4 Oxygen/Acetylene/Fuel Gases/Cartridge Tools

- 5.4.1 Compressed oxygen shall never be used in the place of compressed air.
- 5.4.2 Flash-back (Spark) arrestors shall be fitted to all gas equipment.
- 5.4.3 Liquid Petroleum Gas (LPG) cylinders shall not be stored or left in areas below ground level overnight. Cylinders must be stored upright.
- 5.4.4 The quantity of oxygen, acetylene and LPG cylinders at the point of work shall be restricted to a maximum of one day's supply. Cylinders shall be kept in upright vertical rack containers or be safely secured to a vertical support.
- 5.4.5 Cartridge tools shall be of the low velocity type. Operators must have received adequate training in the safe use and operation of the tool to be used.

5.5 Scaffolding/Temporary Works

- 5.5.1 No aluminum tube shall be used, except for proprietary mobile towers, unless otherwise agreed with the Engineer.
- 5.5.2 Drawings and calculations shall be submitted to the Engineer, prior to commencement of work on site, for all Temporary Works, including excavations, falsework, tower cranes, hoists, services and scaffolding. Design shall conform to international standards.
- 5.5.3 The Engineer will not approve Temporary Work designs but the Contractor shall take account of any comments on such designs made by the Engineer.
- 5.5.4 The Contractor shall inspect and approve all Temporary Works after erection and before access, loading or use is allowed. Completed and approved Temporary Works shall be tagged with a scaff-tag or similar safety system and the Safe Structure insert displayed. For scaffolding, one tag shall be displayed every 32 m² of face area. A central record system shall be kept on all Temporary Work. Temporary Works shall be inspected weekly and similarly recorded.
- 5.5.5 All mobile scaffold towers shall be erected in accordance with the manufacture's instructions and a copy of these shall be submitted to the Engineer prior to any use on site. Additionally, all towers shall be erected complete with access ladder, safety rails and kick boards whatever the height.
- 5.5.6 The Contractor shall repair or replace, immediately, any scaffold including accessories, damaged or weakened from any cause.
- 5.5.7 The Contractor shall ensure that any slippery conditions on scaffolds are eliminated as soon as possible after they occur.
- 5.5.8 All scaffolds used for storing materials, for brick or block laying, for access to formwork or for any other purpose where materials may accidentally fall, shall be provided with wire mesh guards or guards of a substantial material, in addition to kick boards.

5.6 Use of Ladders

- 5.6.1 Manufactured ladders shall meet the applicable safety codes for wood or metal ladders. Metal ladders shall not be used where there is any likelihood of contact with electric cables and

equipment. All metal ladders shall be clearly marked: "Caution - Do not use around electrical equipment".

5.6.2 Job made ladders shall not be permitted.

5.6.3 Extension or straight ladders shall be equipped with non-skid safety feet, and shall be no more than 12 m in height. The maximum height of a stepladder shall be 2 m. Ladders shall not be used as platforms or scaffold planks.

5.6.4 Ladders rungs and steps shall be kept clean and free of grease and oil.

5.6.5 Extension and straight ladders shall be tied off at the top and/or bottom when in use. Only one person shall be allowed on a ladder at a time.

5.6.6 Defective ladders shall be taken out of service and not used. Ladders shall not be painted and shall be inspected for defects prior to use.

5.7 Elevated Work

5.7.1 The Contractor shall provide all personnel, while working at an elevated position, with adequate protection from falls. Details of such protection shall be submitted to and approved by the Engineer.

5.7.2 The Contractor shall carry out daily inspections of all elevated work platforms. Defects shall be corrected prior to use.

5.7.3 Roofing & Sheet Material Laying

(a) A Method Statement detailing the procedures to be adopted shall be submitted to and agreed with the Engineer prior to commencement of work on site.

(b) Mobile elevating work platforms or the equivalent shall be used to install roofing and sheet materials wherever practicable and a suitable base is available.

5.7.4 Erection of Structures

(a) A Method Statement detailing the procedures to be adopted shall be submitted and agreed with the Engineer prior to commencement of work on site.

(b) Safety harnesses and lines shall be provided by the Contractor for use by the erection personnel and worn at all times.

(c) Mobile elevating work platforms or the equivalent shall be used to erect structures wherever practicable and a suitable base is available.

5.7.5 Mobile Elevating Work Platforms

Operators shall be trained in the safe use of such platforms and hold a current Certificate of Competence (see Sub-Clause 2.5).

5.7.6 Hoists

(a) A copy of the current Test Certificate (see Sub-Clause 2.5) shall be submitted to the Engineer before any hoist (personnel or material) is brought into operation on the site.

Where the range of travel is increased or reduced a copy of the revised Test Certificate shall be submitted.

- (b) Each landing gate shall be fitted with a mechanical or electrical interlock to prevent movement of the hoist when any such gate is in the open position.
- (c) Safety harnesses must be worn and used by personnel erecting, altering and dismantling hoists.

5.7.7 Suspended Cradles

- (a) Suspended cradles shall be installed, moved and dismantled by a specialist contractor.
- (b) Suspended cradles shall comply with local regulations.
- (c) All powered suspended cradles shall incorporate independent safety lines to overspeed braking devices and independent suspension lines for personal safety harness attachment.

5.8 Use of Temporary Equipment

- 5.8.1 The safe design capacity of any piece of equipment shall not be exceeded, nor shall the equipment be modified in any manner that alters the original factor of safety or capacity.
- 5.8.2 Mobile equipment shall be fitted with suitable alarm and motion sensing devices, including backup alarm, when required.
- 5.8.3 The Contractor shall ensure that the installation and use of equipment are in accordance with the safety rules and recommendations laid down by the manufacturer, taking into account the other installations already in place or to be installed in the future.
- 5.8.4 The Contractor shall inspect Equipment prior to its use on the Works and periodically thereafter to ensure that it is in safe working order. Special attention shall be given to such items as cables, hoses, guards, booms, blocks, hooks and safety devices. Equipment found to be defective shall not be used and immediately removed from service, and a warning tag attached.
- 5.8.5 Natural and synthetic fiber rope made of material such as manila, nylon, polyester, or polypropylene shall not be used as slings if approved by the Engineer.
- 5.8.6 Only trained, qualified and authorized personnel shall operate equipment. All drivers and operators shall hold a current Certificate of Training Achievement for the equipment being used (see Sub-Clause 2.5).
- 5.8.7 A safety observer shall be assigned to watch movements of heavy mobile equipment where hazards may exist to other personnel from the movement of such equipment, or where equipment could hit overhead lines or structures. The observer shall also ensure that people are kept clear of mobile equipment and suspended loads.
- 5.8.8 When mobile or heavy equipment is traveling onto a public thoroughfare or roadway, a flagman shall insure that traffic has been stopped prior to such equipment proceeding. While the mobile or heavy equipment is traveling on a public roadway, a trailing escort vehicle with a sign warning of a slow-moving vehicle that is dangerous to pass shall be provided.

5.8.9 Cranes:

- (a) The Contractor shall give a minimum of 48 hours notice to the Engineer prior to bringing a mobile crane on site.
- (b) No cranes shall be erected on the site without the prior approval of the Engineer. The Engineer may direct the Contractor as to locations where cranes may not be located. The Contractor shall take such directions into account when submitting his proposals for crane location points, base footings, pick up points and swing radius. Compliance with any such direction shall not entitle the Contractor to any extension of the Period of Completion or to any increase in the Contract Price.
- (c) Safety harnesses shall be worn and used at all times by personnel engaged on the erection, alterations and dismantling of tower cranes.
- (d) The Contractor shall provide a copy of the current Test Certificate (see Sub-Clause 2.5) to the Engineer before any crane (tower or mobile) is brought into operation on the Site.
- (e) All lifting tackle must hold a current Test Certificate (see Sub-Clause 2.5). All lifting tackle must be thoroughly examined every 6 months and an inspection report raised.
- (f) All fibrous/web slings shall be destroyed and replaced 6 months after first use.
- (g) All crane drivers/operators shall hold a Certificate of Training Achievement for the class of crane operated (see Sub-Clause 2.5).
- (h) All banksmen/slingers shall hold a Training Certificate from a recognized training agency (see Sub-Clause 2.5).
- (i) Only certified slingers/banksmen shall sling loads or guide crane/load movement.
- (j) The maximum weekly working hours of a crane driver or banksman shall be restricted to 60 hours.
- (k) Under no circumstances, shall a crane or load come within 4 m of any energized overhead power line or other critical structure.

5.9 Locking-out, Isolating, and Tagging of Equipment

- 5.9.1 Equipment that could present a hazard to personnel if accidentally activated during the performance of installation, repair, alteration, cleaning, or inspection work shall be made inoperable and free of stored energy and/or material prior to the start of work. Such equipment shall include circuit breakers, compressors, conveyors, elevators, machine tools, pipelines, pumps, valves, and similar equipment.
- 5.9.2 Where equipment is subject to unexpected external physical movement such as rotating, turning, dropping, falling, rolling, sliding, etc., mechanical and/or structural constraints shall be applied to prevent such movement.
- 5.9.3 Equipment which has been locked-out, immobilized, or taken out of service for repair or because of a potentially hazardous condition shall be appropriately tagged indicating the reason it has been isolated and/or taken out of service.
- 5.9.4 Where safety locks are used for locking out or isolating equipment, the lock shall be specially identified and easily recognized as a safety lock.

5.10 Installation of Temporary or Permanent Equipment

- 5.10.1 During installation and testing the Contractor's specialist engineer shall be in attendance.
- 5.10.2 All control mechanism panel and wiring diagrams shall be available and printed in both Arabic and either English or French.

5.11 Laser Survey Instruments

- 5.11.1 Details of the types and use of laser instruments shall be submitted and agreed with the Engineer.

5.12 Working in Confined Spaces

- 5.12.1 Confined spaces, including tanks, vessels, containers, pits, bins, vaults, tunnels, shafts, trenches, ventilation ducts, or other enclosures where known or potential hazards may exist, shall not be entered without prior inspection by and authorization from the Site Safety Officer and the issuance of a Hazardous Work Permit.
- 5.12.2 Prior to entering the confined space, the area shall be completely isolated to prevent the entry of any hazardous substances or materials which could cause an oxygen deficient atmosphere. All equipment that could become energized or mobilized shall be physically restrained and tagged. All lines going into the confined space shall be isolated and/or blanked.
- 5.12.3 Personnel working in a confined space where emergency escape or rescue could be difficult, shall wear a safety harness attached to a lifeline.
- 5.12.4 A qualified attendant(s), trained and knowledgeable in job-related emergency procedures, shall be present at all times while persons are working within the confined space. The attendant shall be capable of effecting a rescue, have necessary rescue equipment immediately available, and be equipped with at least the same protective equipment as the person making entry.
- 5.12.5 All equipment to be used in a confined space shall be inspected to determine its acceptability for use. Where a hazard from electricity may exist, equipment utilized shall be of low voltage type.
- 5.12.6 The atmosphere within the confined space shall be tested to determine it is safe to enter. Acceptable limits are:
- oxygen: 19.5% lower, 22% higher;
 - flammable gas: not to exceed 10% of lower explosion limit;
 - toxic contaminants: not to exceed the permissible exposure limit.

Subsequent testing shall be done after each interruption and before re-entering the confined space, as well as at intervals not exceeding 4 hours. Continuous monitoring is preferable and may be necessary in certain situations.

- 5.12.7 Adequate ventilation shall be provided to ensure the atmosphere is maintained within acceptable limits.

5.13 Demolition

- 5.13.1 A detailed Method Statement detailing the demolition procedures/techniques to be used shall be submitted to and approved by the Engineer prior to commencement of work on site.

The Method Statement must include full details of measures to be taken to ensure that there are no persons remaining in the building/structure and to distance members of the public and Contractor's personnel from the building/structure prior to demolition.

5.14 Use of Explosives

5.14.1 The Contractor shall not use explosives without the written permission from the Engineer and relevant authorities (see Sub-Clause 2.5).

5.14.2 The Contractor shall observe all regulations regarding proper purchasing, transportation, storage, handling and use of explosives.

5.14.3 The Contractor shall ensure that explosives and detonators are stored in separate special buildings. These secured buildings shall be constructed, located and clearly marked in Arabic and English:

"DANGER - EXPLOSIVES"

all as approved by the Engineer and relevant authorities (see Sub-Clause 2.5).

5.14.4 The Contractor shall ensure that all possible precautions are taken against accidental fire or explosion, and ensure that explosives and detonators are kept in a proper and safe condition.

5.14.5 The Contractor shall ensure that explosives and detonators are always transported in separate vehicles and kept apart until the last possible moment and that metallic tools are not used to open boxes of explosives or detonators.

5.14.6 Blasting Procedure: the Contractor shall carry out blasting operations in a manner that will not endanger the safety of persons and property. The Contractor shall, along with other necessary precautions:

- (a) clear all persons from buildings and the area affected by the blasting. All such persons shall be given adequate notice of the actual time and date of blasting,
- (b) ensure that police and other local authorities are kept fully informed, in advance, of the blasting programme so that they may be present when blasting takes place if they so require,
- (c) erect warning notices around the area affected that blasting operations are in progress,
- (d) carry out a thorough search of buildings and the area affected prior to blasting,
- (e) ensure that blasting is only carried out by experienced shot firers. Priming, charging, stemming and shot firing shall be carried out with greatest regard for safety and in strict accordance with the rules and regulations of the relevant authorities (see Sub-Clause 2.5).
- (f) ensure that explosive charges are not excessive, charged boreholes are properly protected and proper precautions are taken for the safety of persons and property,

5.14.7 The Contractor shall maintain an up-to-date inventory of all explosives and explosive devices and shall submit a monthly report to the Engineer, detailing the use of all explosives by date and location.

5.15 Excavation and Trenching

- 5.15.1 An excavation permit signed by the Engineer must be issued before excavation proceeds in any work location. The Contractor shall investigate and identify the location of existing services by study of the drawings, a visual/physical study of the site, sweeping by appropriate detection equipment and where necessary hand excavation of trial holes.

Following this investigation, the Contractor shall submit a written request for an excavation permit to the Engineer.

The Engineer will return the permit signed and dated to indicate:

- services which are to be maintained.
- services which are to be isolated.
- any special precautions to be taken.

A sample Excavation Permit is given in Appendix 1.

- 5.15.2 The issue of an Excavation Permit by the Engineer shall not relieve the Contractor of his responsibilities under the Contract.
- 5.15.3 The side of all excavations and trenches exceeding 1.3 meters in depth which might expose personnel or facilities to danger resulting from shifting earth shall be protected by adequate temporary supports or sloped to the appropriate angle of repose.
- 5.15.4 All excavations, slopes and temporary supports shall be inspected daily and after each rain, before allowing personnel to enter the excavation.
- 5.15.5 Excavations 1.3 meters or more in depth and occupied by personnel shall be provided with ladders as a means for entrance and egress. Ladders shall extend not less than 1 meter above the top of the excavation.
- 5.15.6 The Contractor shall provide adequate barrier protection to all excavations. Barriers shall be readily visible by day or night.
- 5.15.7 Excavated or other materials shall not be stored at least 0.65 meters from the side of excavations.
- 5.15.8 The Contractor shall:
- (a) ensure that stability and structural integrity of the Works are maintained during construction and shall provide temporary supports where necessary and shall not overload any part of the Works with materials, Plant or Contractor's Equipment.
 - (b) provide and maintain during the execution of the Works all shoring, strutting, needling and other supports as may be necessary to preserve stability of buildings, whether new or existing, on the site or adjoining property that may be endangered or affected by the Works.
 - (c) submit to the Engineer an outline of the methods proposed to be used for the support necessary to preserve stability of buildings or other structures, together with the relevant drawings, details, calculations, specifications and subsoil investigation, as necessary for approval. Such approval shall not pass to the Employer or the Engineer the responsibility for maintaining the stability of the buildings or relieve the Contractor from his responsibility.

5.16 Concrete Reinforcement Starter Bars

- 5.16.1 The Contractor shall ensure concrete reinforcement starter bars are not a danger to personnel. Where permitted by the Engineer, starter bars shall be bent down. Alternatively, the starter bars shall be protected using either hooked starters, plastic caps, plywood covers or other methods agreed with the Engineer.

6 Environmental and Health Requirements

6.1 Protection of the Environment

- 6.1.1 The Contractor shall be knowledgeable of and comply with all environmental laws, rules and regulations for materials, including hazardous substances or wastes under his control. The Contractor shall not dump, release or otherwise discharge or dispose of any such material without the authorization of the Engineer.
- 6.1.2 Any release of a hazardous substance to the environment, whether air, water or ground, must be reported to the Engineer immediately. When releases resulting from Contractor action occur, the Contractor shall take proper precautionary measures to counter any known environmental or health hazards associated with such release. These would include remedial procedures such as spill control and containment and notification of the proper authorities.

6.2 Air Pollution

- 6.2.1 The Contractor, depending on the type and quantity of materials being used, may be required to have an emergency episode plan for any releases to the atmosphere. The Contractor shall also be aware of local ordinances affecting air pollution.
- 6.2.2 The Contractor shall take all necessary measures to limit pollution from dust and any wind blown materials during the Works, including damping down with water on a regular basis during dry climatic conditions.
- 6.2.3 The Contractor shall ensure that all trucks leaving the Site are properly covered to prevent discharge of dust, rocks, sand, etc.

6.3 Water Pollution

- 6.3.1 The Contractor shall not dispose of waste solvents, petroleum products, toxic chemicals or solutions in the city drainage system or watercourse, and shall not dump or bury garbage on the Site. These types of waste shall be taken to an approved disposal facility regularly, and in accordance with requirements of relevant Authorities. The Contractor shall also be responsible to control all run-offs, erosion, etc.

6.4 Solid Waste

- 6.4.1 General Housekeeping
- (a) The Contractor shall maintain the site and any ancillary areas used and occupied for performance of the Works in a clean, tidy and rubbish-free condition at all times.
 - (b) Upon the issue of any Taking-Over Certificate, the Contractor shall clear away and remove from the Works and the Site to which the Taking-Over Certificate relates, all Contractor's Equipment, surplus material, rubbish and Temporary Works of every kind, and leave the said Works and Site in a clean condition to the satisfaction of the

Engineer. Provided that the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations during the Defects Liability Period.

6.4.2 Rubbish Removal and Disposal

- (a) The Contractor shall comply with statutory and municipal regulations and requirements for the disposal of rubbish and waste.
- (b) The Contractor shall provide suitable metal containers for the temporary storage of waste.
- (c) The Contractor shall remove rubbish containers from site as soon as they are full. Rubbish containers shall not be allowed to overflow.
- (d) The Contractor shall provide hardstandings for and clear vehicle access to rubbish containers.
- (e) The Contractor shall provide enclosed chutes of wood or metal where materials are dropped more than 7 meters. The area onto which the material is dropped shall be provided with suitable enclosed protection barriers and warning signs of the hazard of falling materials. Waste materials shall not be removed from the lower area until handling of materials above has ceased.
- (f) Domestic and biodegradable waste from offices, canteens and welfare facilities shall be removed daily from the site.
- (g) Toxic and hazardous waste shall be collected separately and be disposed of in accordance with current regulations.
- (h) No waste shall be burnt on Site unless approved by the Engineer.

6.4.3 Asbestos Handling and Removal

The Contractor shall comply with all local regulations regarding the handling of asbestos materials. In the absence of local regulations, relevant International Standards shall apply.

6.4.5 Pest Control

The Contractor shall be responsible for rodent and pest control on the Site. If requested, the Contractor shall submit to the Engineer, for approval, a detailed programme of the measures to be taken for the control and eradication of rodents and pests.

6.5 Noise Control

6.5.1 The Contractor shall ensure that the work is conducted in a manner so as to comply with all restrictions of the Authorities having jurisdiction, as they relate to noise.

6.5.2 The Contractor shall, in all cases, adopt the best practicable means of minimizing noise. For any particular job, the quietest available plant/and or machinery shall be used. All equipment shall be maintained in good mechanical order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable. Stationary noise sources shall be sited as far away as possible from noise-sensitive areas, and where necessary acoustic barriers shall be

used to shield them. Such barriers may be proprietary types, or may consist of site materials such as bricks or earth mounds as appropriate.

- 6.5.3 Compressors, percussion tools and vehicles shall be fitted with effective silencers of a type recommended by the manufacturers of the equipment. Pneumatic drills and other noisy appliances shall not be used during days of rest or after normal working hours without the consent of the Engineer.
- 6.5.4 Areas where noise levels exceed 90 decibels, even on a temporary basis, shall be posted as high noise level areas.

6.6 Protection of Archaeological and Historical Sites

- 6.6.1 Excavation in sites of known archaeological interest should be avoided. Where this is unavoidable, prior discussions must be held with the Directorate of Antiquities in order to undertake pre-construction excavation or assign an archaeologist to log discoveries as construction proceeds. Where historical remains, antiquity or any other object of cultural or archaeological importance are unexpectedly discovered during construction in an area not previously known for its archaeological interest, the following procedures should be applied:
- a) Stop construction activities.
 - b) Delineate the discovered site area.
 - c) Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard should be present until the responsible authority takes over.
 - d) Notify the responsible foreman/archaeologist. Who in turn should notify the responsible authorities, the General Directorate of Antiquities and local authorities (within less than 24 hours).
 - e) Responsible authorities would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out.
 - f) An evaluation of the finding will be performed by the General Directorate of Antiquities. The significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values.
 - g) Decision on how to handle the finding will be reached based on the above assessment and could include changes in the project layout (in case of finding an irrevocable remain of cultural or archaeological importance), conservation, preservation, restoration or salvage.
 - h) Implementation of the authority decision concerning the management of the finding.
 - i) Construction work could resume only when permission is given from the General Directorate of Antiquities after the decision concerning the safeguard of the heritage is fully executed.
- 6.6.2 In case of delay incurred in direct relation to Archeological findings not stipulated in the contract (and affecting the overall schedule of works), the contractor may apply for an extension of time. However the contractor will not be entitled for any kind of compensation or claim other than what is directly related to the execution of the archeological findings works and protections.

7 Additional Requirements for Work in Public Areas

7.1 General

- 7.1.1 These additional requirements shall apply to all works carried out in Public Areas.

- 7.1.2 Public Areas are defined as areas still used by or accessible to the public. These include public roads and pavements, occupied buildings and areas outside the Contractor's boundary fencing.
- 7.1.3 All work in Public Areas shall be carried out to minimize disturbance and avoid dangers to the public.
- 7.1.4 Before commencing work, the Contractor shall ensure that all necessary resources, including labour, plant and materials, will be available when required and that the works will proceed without delays and be completed in the shortest possible time. Periods of inactivity and slow progress or delays in meeting the agreed programme for the works, resulting from the Contractor's failure to provide necessary resources or other causes within the control of the Contractor, will not be accepted. In the event of such inactivity, slow progress or delays, the Contractor shall take immediate action to rectify the situation, including all possible acceleration measures to complete the works within the agreed programme. Details of the actions and acceleration measures shall be submitted to the Engineer. If the Engineer is dissatisfied with the Contractor's proposals, the Contractor shall take such further actions or measures as required by the Engineer. All costs incurred shall be the responsibility of the Contractor.

7.2 Method Statement

- 7.2.1 The Contractor shall submit to the Engineer a method statement for each separate area of work in Public Areas. The Method Statement shall include:
- (a) a general description of the Works and methodology of how it will be carried out.
 - (b) details of the measures and temporary works to minimize disturbance and safeguard the public. These shall include temporary diversions, safety barriers, screens, signs, lighting, watchmen and arrangements for control of traffic and pedestrians and advance warning to be given to the public.
 - (c) details of temporary reinstatement and maintenance of same prior to final reinstatement.
 - (d) for works involving long lengths of trenches or works to be completed in sections, the lengths or sections of each activity (eg up to temporary reinstatement, temporary reinstatement, final reinstatement) to be carried out at any one time.
 - (e) details of the availability of necessary resources (labour, plant, materials, etc) to complete the work.
 - (f) a programme showing start and completion dates and periods for all activities of each length or section, including temporary works, and the works overall.
 - (g) such further information as necessary or required by the Engineer.
- 7.2.2 The Contractor shall not commence work, including temporary works, until approval of the Contractor's Method Statement by the Engineer.
- 7.2.3 Method Statements shall be updated based on actual progress or as and when required by the Engineer.

7.3 Closure of Roads, Etc

- 7.3.1 The closure or partial closure of roads, pavements and other public areas will only be permitted if approved by the Engineer and Relevant Authorities. The Contractor shall detail for each closure the extent of area to be closed, the reasons and duration of the closure and, where appropriate, proposed diversions.

A sample Street Closure Permit is given in Annex 2.

- 7.3.2 Access to Properties Affected by the Works:

The Contractor shall identify, protect and maintain accesses to all properties affected by the works.

- 7.3.3 The Contractor shall ascertain and comply with any regulations concerning traffic and parking in addition to the obligations imposed by the Conditions of Contract and by law.

- 7.3.4 The Contractor shall provide and maintain all necessary diversion, diversion signs, barricades, fencing, lighting, flagmen or stop/go Signs where the Works affect the safety of traffic and the public on existing roads or temporary diversion roads.

7.4 Trench and Other Excavations

- 7.4.1 The requirements covering trench and other excavations will depend on the location and type of the excavation and the potential risks to the public.

- 7.4.2 The following guidelines apply particularly to trenches but shall also apply to other types of excavations:

- (a) before commencing work the Contractor shall:

- notify the Engineer on the location and duration of the work. An excavation permit signed by the Engineer must be issued in accordance with Sub-Clause 5.15.1 before excavation proceeds in any work location.;
- obtain permission from relevant authorities including the police when required. The Contractor's attention is drawn to the requirements of Legislative Decree No 68 dated 9 September 1983, issued by the President of the Republic of Lebanon, and in particular to the provisions therein regarding prior notification by the Contractor to and the issue of excavation licenses by the Director of Roads or the Head of the Municipal Authority concerned, as applicable, before the commencement of excavations within the limits of streets, roads and other areas defined under the said Decree.
- erect all temporary works such as barriers, warning signs, lighting, etc;
- have available adequate materials for temporary supports to sides of excavations and necessary labour, plant and materials to complete the work within the shortest possible time;

- (b) in carrying out the works the Contractor shall, unless otherwise permitted or required by the Engineer:

- not open more than one excavation within a radius of 250 metres;

- limit the length of trench excavation open at one time to 150 metres;
- maintain and alter or adapt all temporary works including supports to sides of excavations;
- remove all surplus excavated material the same day it is excavated;
- complete the works, including final reinstatement within ten days;
- where final reinstatement is not achieved within the required time, to carry out temporary reinstatement;
- ensure that any temporary reinstatement is maintained at the correct level until final reinstatement is achieved.

7.4.3 The above guidelines shall not relieve the Contractor of his obligations and responsibilities.

7.5 Safety Barriers

7.5.1 Safety barriers shall be provided to the perimeter of work areas and to trench and other types of excavations and to existing openings such as manholes, draw pits and the like. When exposed to the public, safety barriers shall be provided to both sides of trenches and around all sides of openings.

7.5.2 The Contractor shall provide details of the type or types of safety barriers for each excavation for the approval of the Engineer prior to commencing work. No work shall commence until the safety barriers are in place.

7.5.3 The type of safety barrier used shall be appropriate to the particular location and the potential risks to the public. Examples of different types of safety barriers are given below along with attached figures:

- Type 1 - excavated material;
- Type 2 - non-rigid barrier of rope or florescent tape strung between metal rods driven into the ground;
- Type 3 – non-rigid barrier type K2, K5a, K5c and K8.
- Type 4 - rigid concrete barrier. Such barriers should be secured by means of dowels driven into the ground.

7.5.4 The following are guidelines on the type of safety barriers that could be used in differing situations. They apply particularly to trenches but also apply to other types of excavations, existing openings and to the perimeter of work areas:

- areas not subject to vehicular traffic - Types 1 or 2;
- roadways (low traffic speed) - Types 1 and 3 or Types 2 and 3;
- roadways (high traffic speed) - Type 3 (short term 1 to 2 days) or Type 4 (long term more than 2 days).

7.5.5 The above examples of the types of barriers and the guidelines on situations in which they could be used shall not relieve the Contractor of his obligations and responsibilities.

8 Contractor's Site Check List

- 8.1 A sample Contractor's Site Check List is included in Annex 3. This is included to assist contractors should they wish to introduce such a system as part of their site management procedures. The list is not exhaustive and further items will need to be added by the Contractor.
- 8.2 The list is issued for guidance only, and does not, in any way, revise or limit the requirements covered elsewhere in these Regulations.

9 Protection of Other Property and Services

- 9.1 Roads And Footpaths: the Contractor shall protect public and private roads, footpaths and the like from damage by site traffic or other causes arising from the execution of the Works and shall repair any damage to the satisfaction of the relevant public authority or private owner.
- 9.2 Trees, Hedges, Shrubs, Lawns: the Contractor shall protect and preserve, trees, hedges, shrubs, lawns etc., and shall replace to approval, or treat as instructed, any plants or areas damaged or removed without approval.
- 9.3 Existing Features: the Contractor shall prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other features on the Site or adjacent thereto which are to remain in position during the execution of the Works.
- 9.4 Existing Services: The Contractor shall:
- (a) notify all service authorities and private owners before commencing any work which may affect or damage existing drains and services and observe all service authorities' regulations and/or recommendations work adjacent to existing services.
 - (b) ascertain the positions of all services not indicated in the Contract Documents and check the positions of those which are so indicated.
 - (c) adequately protect, maintain and prevent damage to all services and shall not interfere with their operation without the consent of the service authority or owner.

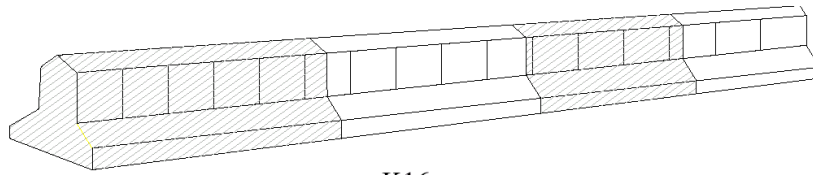
If any damage is caused to existing services as a result of execution of the Works, the Contractor shall notify the Project Manager Representative/Engineer's Representative and the service authority or private owner and make arrangements to repair the damage to the satisfaction of the service authority or private owner as appropriate.

- 9.5 Adjoining Property: The Contractor shall:
- take all reasonable precautions to prevent damage to adjoining property and, if any damage is caused as a result of the execution of the Works, make good to the satisfaction of the owner.
 - obtain permission of the owners if it is necessary to erect Temporary Works or otherwise use adjoining property and pay all charges.
 - advise owners or occupiers of adjoining property of the dates on which work which may affect them is to be executed
- 9.6 Existing Condition of roads, paths, features, services and adjoining property which is at risk from damage shall be recorded by photographs or surveys as appropriate.

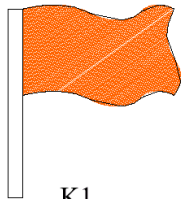
9.7 Occupied Premises: The Contractor shall:

- (a) where the works are to be carried out in or around occupied premises ascertain the times and nature of the occupation and use. Carry out the Works with minimum inconvenience, nuisance and danger to the occupants and users.
- (b) if the danger to the occupied premises is such as to involve the safety of persons advise the Employer to evacuate temporarily such persons until the danger is eliminated. The expense of evacuation, temporary accommodation and re-occupation of the premises and other expenses shall be borne by the Employer.

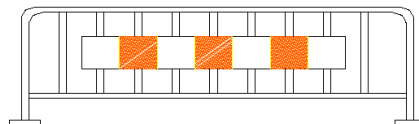
TEMPORARY TRAFFIC CONTROL DEVICES



K16

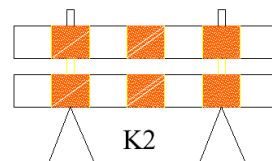


K1



K2

نهاية الاشغال



K2



K5a



K8



K13b

K5c

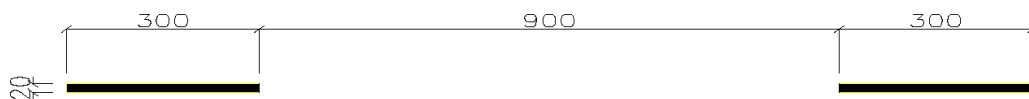
TEMPORARY MARKING

THESE LINES ARE YELLOW AND CAN BE
REMOVED WITHOUT ANY RESIDUAL TRACE.
DIMENSIONS ARE IN CM



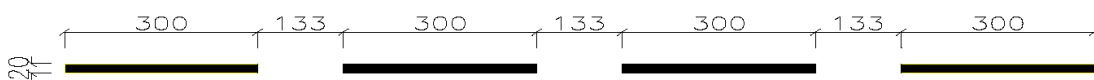
FOR CONTINUOUS EDGE LINE AND FOR SEPARATING THE TRAFFIC IN OPPOSITE DIRECTIONS

MR2 TEMPORARY



FOR SEPARATING THE TRAFFIC IN THE SAME DIRECTION

TYPE T1

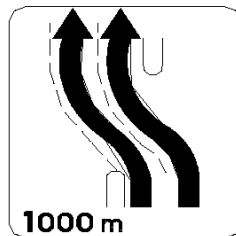


FOR SEPARATING THE TRAFFIC IN THE SAME DIRECTION

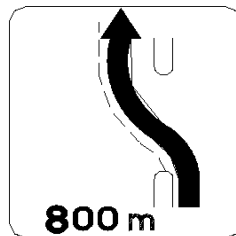
TYPE T3

TEMPORARY GUIDE SIGNS

BLACK TEXT AND GRAPHICS ON YELLOW SIGN PLATE



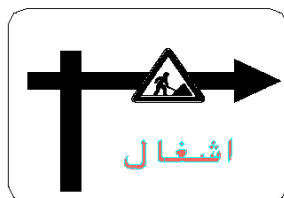
KD8

NOTICE PAVEMENT CHANGE
KD8

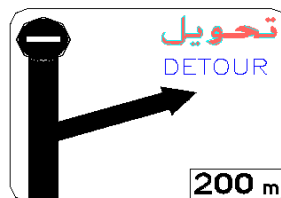
KD10



KD10



KD2



NOTICE THE DIVERSION

KD2

NOTICE REDUCTION IN
NUMBER OF LANES

KD10



KC1



KD5

TEMPORARY WARNING SIGNS



AK2



AK3



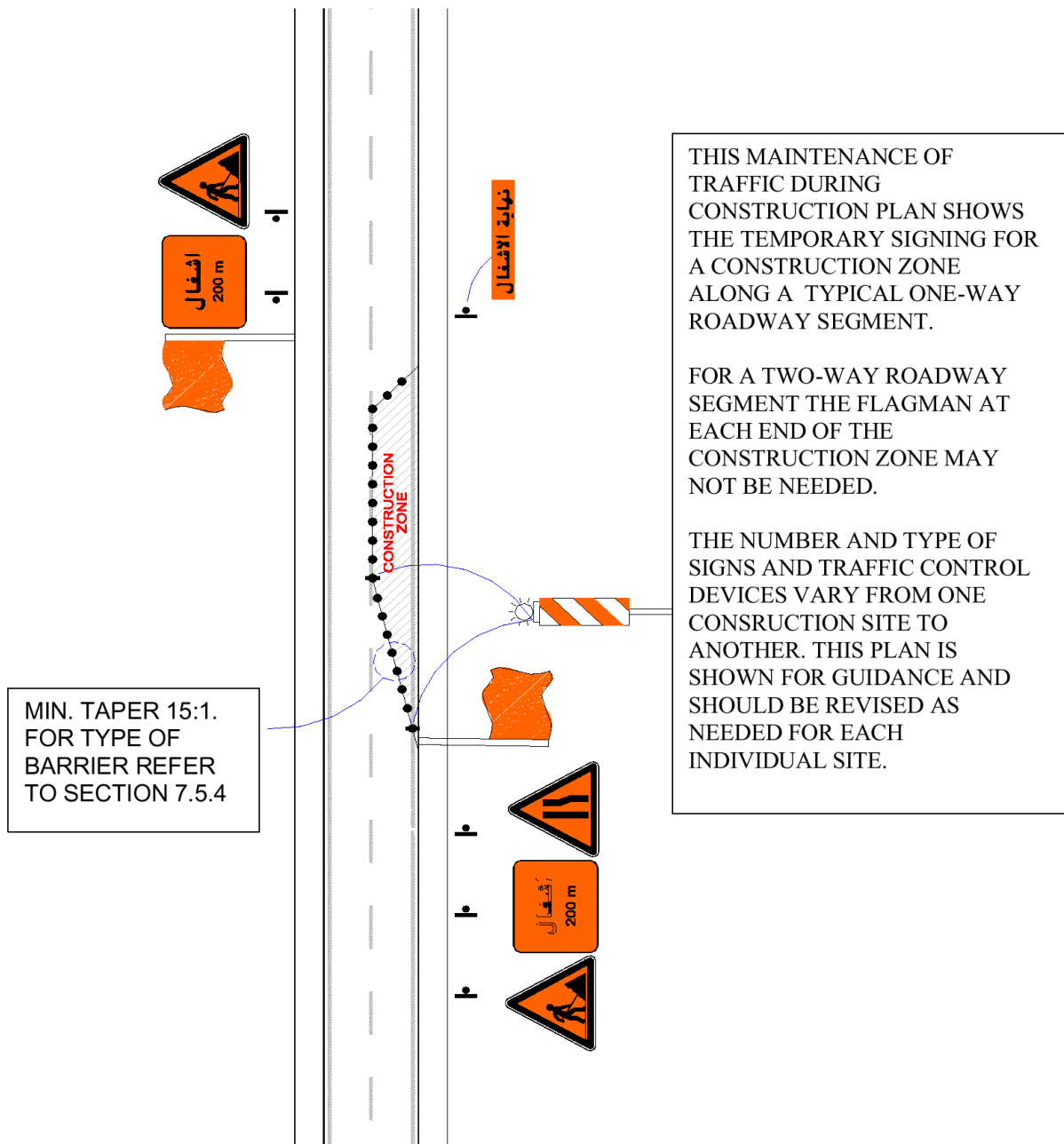
AK22a



AK5

SIZE TO BE DETERMINED BASED ON ROADWAY SPEED - USE 60KPH OR 80 KPH

TEMPORARY ROAD WORKS MAINTENANCE OF TRAFFIC DURING CONSTRUCTION TYPICAL LANE CLOSURE



Annex 1 - Sample Excavation Permit

To: (Engineer)

From: (Contractor)

Date:

Employer Contract No:

Request for Excavation Permit No:

Please give approval for excavation to proceed in the following area:

Work to start on:

Existing services have been checked and identified by:

Drawings	#	Physical Survey#
----------	---	------------------

Catscan	#	Trial Holes Excavation #
---------	---	--------------------------

Signed (Contractor):

Approval of Engineer

The above excavation may proceed, subject to the following:

Services to be maintained:

Services to be isolated before work proceeds:

Other matters:

Signed (Engineer):

Date:

Annex 2 - Sample Street Closure Permit

To: (Engineer)

From: (Contractor)

Date:

Employer Contract No:

Request for Street Closure Permit No:

Please give approval for the closure of the following street(s) from to
(*dates*)

Street(s):

Reasons:

Proposed diversions:

Signed (Contractor):

Approval of the Engineer

The above street(s) may be closed for the periods stated subject to the following conditions:

Approval has been given by relevant authorities and the police;

Other:

Signed (Engineer):

Date:

Annex 3 - Sample Contractor's Site Check List

Safe Access:

- arrangements for visitors and new workers to the site
- safe access to working locations
- walkways free from obstructions
- edge protection to walkways over 2m above ground
- holes fenced or protected with fixed covers
- tidy site and safe storage of materials
- waste collection and disposal
- chutes for waste disposal, where applicable
- removal or hammering down of nails in timber
- safe lighting for dark or poor light conditions
- props or shores in place to secure structures, where applicable

Ladders:

- to be used only if appropriate
- good condition and properly positioned
- located on firm, level ground
- secure near top. If not possible, to be secured near the bottom, weighted or footed to prevent slipping
- top of ladder minimum 1 metre above landing place

Scaffolding:

- design calculations submitted
- proper access to scaffold platform
- properly founded uprights with base plates
- secured to the building with strong ties to prevent collapse
- braced for stability
- loadbearing fittings, where required
- uprights, ledgers, braces and struts not to be removed during use
- fully boarded working platforms, free from defects and arranged to avoid tipping or tripping
- securely fixed boards against strong winds
- adequate guard rails and toe boards where scaffold 2m above ground
- designed for loading with materials, where appropriate
- evenly distributed materials
- barriers or warning notices for incomplete scaffold (ie not fully boarded)
- weekly inspections and after bad weather by competent person
- record of inspections

Excavation:

- underground services to be located and marked and precautions taken to avoid them
- adequate and suitable timber, trench sheets, props and other supporting materials available on site before excavation starts
- safe method for erecting/removal of timber supports
- sloped or battered sides to prevent collapse
- daily inspections after use of explosives or after unexpected falls of materials
- safe access to excavations (eg sufficiently long ladder)
- barriers to restrict personnel/plant
- stability of neighbouring buildings risk of flooding

- materials stacked, spoil and vehicles away from top of excavations to avoid collapse
- secured stop blocks for vehicles tipping into excavations

Roof work:

- crawling ladders or boards on roofs more than 10 degrees
- if applicable, roof battens to provide a safe handhold and foothold
- barriers or other edge protection
- crawling boards for working on fragile roof materials such as asbestos cement sheets or glass. Guard rails and notices to same
- rooflights properly covered or provided with barriers
- during sheeting operations, precautions to stop people falling from edge of sheet
- precautions to stop debris falling onto others working under the roof work

Transport and mobile plant:

- in good repair (eg steering, handbrake, footbrake)
- trained drivers and operators and safe use of plant
- secured loads on vehicles
- passengers prohibited from riding in dangerous positions
- propping raised bodies of tipping lorries prior to inspections
- control of on-site movements to avoid danger to pedestrians, etc
- control of reversing vehicles by properly trained banksmen, following safe system of work

Machinery and equipment:

- adequate and secured guards in good repair to dangerous parts, eg exposed gears, chain drives, projecting engine shafts

Cranes and lifting appliances:

- weekly recorded inspections
- regular inspections by competent persons
- test certificates
- competent and trained drivers over 18 years of age
- clearly marked controls
- checks by driver and banksman on weight of load before lifting
- efficient automatic safe load indicator, inspected weekly, for jib cranes with a capacity of more than one tonne
- firm level base for cranes
- sufficient space for safe operation
- trained banksman/slinger to give signals and to attach loads correctly, with knowledge of lifting limitations of crane
- for cranes with varying operating radius, clearly marked safe working loads and corresponding radii
- regularly maintenance
- lifting gear in good condition and regularly examined

Electricity:

- measures to protect portable electric tools and equipment from mechanical damage and wet conditions
- checks for damage to or interference with equipment, wires and cables
- use of the correct plugs to connect to power points
- proper connections to plugs; firm cable grips to prevent earth wire from pulling out

- "permit-to-work" procedures, to ensure safety
- disconnection of supplies to overhead lines or other precautions where cranes, tipper lorries, scaffolding, etc. might touch lines or cause arcing

Cartridge operated tools:

- maker's instruction being followed
- properly trained operators, awareness of dangers and ability to deal with misfires
- safety goggles
- regular cleaning of gun
- secure place for gun and cartridges when not in use

Falsework/formwork:

- design calculations submitted
- method statement dealing with preventing falls of workers
- appointment of falsework coordinator
- checks on design and the supports for shuttering and formwork
- safe erection from steps or proper platforms
- adequate bases and ground conditions for loads
- plump props, on level bases and properly set out
- correct pins used in the props
- timberwork in good condition
- inspection by competent person, against agreed design before pouring concrete

Risks to the Public:

- identify all risks to members of the public on and off site, eg materials falling from scaffold etc., site plant and transport (access/egress) and implement precautions, eg scaffold fans/nets, banksmen, warning notices etc
- barriers to protect/isolate persons and vehicles
- adequate site perimeter fencing to keep out the public and particularly children. Secure the site during non-working periods
- make safe specific dangers on site during non-working periods, eg excavations and openings covered or fenced, materials safely stacked, plant immobilised, ladders removed or boarded

Fire - general:

- sufficient number and types of fire extinguishers
- adequate escape routes, kept clear
- worker awareness of what to do in an emergency

Fire - flammable liquids:

- proper storage area
- amount of flammable liquid on site kept to a minimum for the day's work
- smoking prohibited; other ignition sources kept away from flammable liquids
- proper safety containers

Fire - compressed gases, eg oxygen, LPG, acetylene:

- properly stored cylinders
- valves fully closed on cylinders when not in use
- adopt "hot work" procedures
- site cylinders in use outside huts

Fire - other combustible materials:

- minimum amount kept on site
- proper waste bins
- regular removal of waste material

Noise:

- assessment of noise risks
- noisy plant and machinery fitted with silencers/muffs
- ear protection for workers if they work in very noisy surroundings

Health:

- identify hazardous substances, eg asbestos, lead, solvents etc and assess the risks
- use of safer substances where possible
- control exposure by means other than by using protective equipment
- safety information sheets available from the supplier
- safety equipment and instructions for use
- keep other workers who are not protected out of danger areas
- testing of atmosphere in confined spaces; provision of fresh air supply if necessary.
Emergency procedures for rescue from confined spaces

Manual handling:

- avoid where risk of injury
- if unavoidable, assess and reduce risks

Protective clothing:

- suitable equipment to protect the head, eyes, hands and feet where appropriate
- enforce wearing of protective equipment

Welfare:

- suitable toilets
- clean wash basin, hot/warm water, soap and towel
- room or area where clothes can be dried
- wet weather gear for those working in wet conditions
- heated site hut where workers can take shelter and have meals with the facility for boiling water
- suitable first aid facilities

Work in Public Areas

- all risks to the public identified
- method statement approved
- road closures approved
- temporary diversions in place
- safety barriers erected/maintained
- safety signs and lighting installed/maintained
- labour, materials, plant and other resources sufficient to meet programme
- temporary reinstatement completed and properly maintained
- permanent reinstatement completed at earliest possible date

Conditions of Contract

Appendix 2

VAT MandateValue Added Tax

Law # 379 dated 14/12/2001 amended by Law No. 64 dated 26/10/2017

- 1- The Contractor/Consultant shall be registered in the Ministry of Finance – VAT Department to be able to invoice the VAT to the Employer or obtain its refund from the Ministry of Finance, according to the financing source of the contract.
- 2- The Contractor/Consultant shall submit its offer without calculating the VAT in its unit price.
- 3- Method of invoicing the VAT for contracts totally financed by the Lebanese State:
The Contractor/Consultant shall invoice the VAT to the Employer upon submittal of its statements by adding 11% VAT on the net value of the statement, separately from the value of the statement.
- 4- Method of VAT invoicing/refund for contracts partially financed by foreign sources:
For the section locally financed, the Contractor/Consultant shall invoice the VAT to the Employer in accordance with clause 3 above.
For the section financed by foreign sources, the Contractor/Consultant shall obtain the VAT refund directly from the Ministry of Finance.
- 5- Methods of VAT refund for contracts totally financed by foreign sources:
The contracts totally financed by foreign sources shall be exempted from the VAT. In the event the Contractor/Consultant is bound to pay this tax, the latter shall obtain its refund directly from the Ministry of Finance and not from the Employer. (Refer to Article 19 – clause 4 of Law # 379, and Article 3 (b) of implementation Decree # 7336 dated 31/01/2002.)

Conditions of Contract**Appendix 3****Power of Attorney for Firm's Representative**

The representative of the moral person that will be declared successful bidder has the necessary prerogatives to carry out any legal proceeding or measure in connection with the Tender, and that said representative should submit for this purpose an official document proving that he is the holder of such prerogatives, namely when the act is of disposal nature such as to waive, to release, to cash, to disclaim and to acknowledge, provided that said document is not older than three months from the date of the Tender submission.

CONTRACTUAL FORMS

FORM OF AGREEMENT

This Agreement made the -----day of -----20-----between -----
-----of -----(hereinafter called “the Employer”) of the one
part and -----
----- (hereinafter called the “Contractor”) of the
other part

WHEREAS the Employer is desirous that certain Works should be executed by the Contractor, Viz. ----

and has accepted a Bid by Contractor for the execution and completion of such Works and remedying
of any defects therein.

Now this agreement witnesses as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
 - a) The form of Agreement;
 - b) The addendum(s) to Tender Documents (if any);
 - c) The Appendix to Bid
 - d) The Conditions of Particular Application (Part II);
 - e) The General Conditions of Contract (Part I);
 - f) The General Requirements and Preliminaries (if any);
 - g) The Specifications;
 - h) The Drawings;
 - i) The priced Bill of Quantities
 - j) The breakdown of Bill of Quantities prices
 - k) Any other document forming part of the Contract including the Contractor’s Bid insofar as it is not covered by any of the foregoing;
3. This agreement shall be considered embodying the employer’s letter of Acceptance referred to in the Conditions of Contract. All actions and/or activities under the contract that relate to the date of the Letter of Acceptance shall be deemed to relate to the date of this agreement.
4. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
5. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first above written.

Signed Sealed and Delivered by the

The Employer
Address
Signed
Name
Affixed Seal

The Contractors
Address
Signed
Name
Affixed Seal

SPECIMEN FORM

**BANK GUARANTEE FOR GOOD PERFORMANCE OF THE CONTRACT
(for Construction Works)**

To: Council for Development and Reconstruction
Tallet Al-Serail
PO Box 11-3170
Beirut, Lebanon

Dear Sirs,

Re: Guarantee for Good Performance of the Contract No____

According to the terms of contract, dated____, for the _____, concluded between
the **Council for Development and Reconstruction**
(hereafter called the Employer) and

(hereafter called the Contractor),
the Contractor undertakes to produce a Bank Guarantee for good performance of the contract of __%
of the value of the contract or the amount of_____.

We hereby unconditionally and irrevocably guarantee jointly and severally with the Contractor as a
primary obligator and not as a surety merely, to pay the Employer upon its first demand and without
cavil or argument any amounts up to the maximum of _____
_____, in the event according to the binding opinion of the Employer, the Contractor
would fail to comply with his contractual obligations.

The failure of the Contractor to comply with his contractual obligations shall be advised to us in
writing with a copy to the Contractor.

This guarantee shall enter into effect on the date of entry into force of the Contract and shall remain
valid until(*insert date*) or until 28 days after the date of issuing the Defects Liability
Certificate, whichever comes later.

DATE:

SIGNATURE OF THE BANK

SPECIMEN FORM

**BANK GUARANTEE FOR GOOD PERFORMANCE OF THE CONTRACT
(for Landfilling Operation)**

To: Council for Development and Reconstruction
Tallet Al-Serail
PO Box 11-3170
Beirut, Lebanon

Dear Sirs,

Re: Guarantee for Good Performance of the Contract No____

According to the terms of contract, dated____, for the _____, concluded between
the **Council for Development and Reconstruction**
(hereafter called the Employer) and

(hereafter called the Contractor),
the Contractor undertakes to produce a Bank Guarantee for good performance of the contract of __%
of the value of the contract or the amount of_____.

We hereby unconditionally and irrevocably guarantee jointly and severally with the Contractor as a
primary obligator and not as a surety merely, to pay the Employer upon its first demand and without
cavil or argument any amounts up to the maximum of _____
_____, in the event according to the binding opinion of the Employer, the Contractor
would fail to comply with his contractual obligations.

The failure of the Contractor to comply with his contractual obligations shall be advised to us in
writing with a copy to the Contractor.

This guarantee shall enter into effect on the first day of the **Landfilling Operation** and shall remain
valid until (*Insert date*) or until 28 days after the date of issuing the Defects Liability Certificate
for Operation Services, whichever comes later.

DATE:

SIGNATURE OF THE BANK

SPECIMEN FORM

BANK GUARANTEE FOR ADVANCE PAYMENT

(NOT APPLICABLE)

To: Council for Development and Reconstruction
Tallet Al-Serail
PO Box 11-3170
Beirut, Lebanon

Dear Sirs,

Re: Guarantee for Advance Payment No____

According to the terms of contract, dated____, for the _____, concluded between
the **Council for Development and Reconstruction**
(hereafter called the Employer) and

(hereafter called the Contractor),
the Employer undertakes to pay the Contractor __% of the value of the contract or the amount of _____ by way of advance payment. The said advance payment shall be paid to the Contractor upon receipt by the Employer of the original of this guarantee.

We hereby unconditionally and irrevocably guarantee jointly and severally with the Contractor as a primary obligator and not as a surety merely, to pay the Employer upon its first demand and without cavil or argument any amounts up to the maximum of _____, in the event according to the binding opinion of the Employer, the Contractor would fail to comply with his contractual obligations.

The failure of the Contractor to comply with his contractual obligations shall be advised to us in writing with a copy to the Contractor.

This guarantee shall enter into effect on the date of payment to the Contractor of the advance payment and shall remain valid until(*insert date*) or until the Employer has received full repayment of the same amount from the Contractor, whichever comes later.

DATE:

SIGNATURE OF THE BANK