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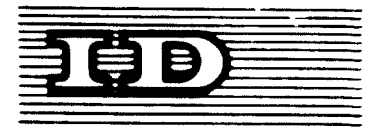
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08302



Distr.
LIMITED

ID/WG.281/2
11 September 1978

ENGLISH

United Nations Industrial Development Organization

Second Consultation Meeting on
the Fertilizer Industry
Innsbruck, Austria, 6 - 10 November 1978
Agenda items 3 (a) and 5 (a)

THE PREPARATION BY UNIDO OF MODEL FORMS OF CONTRACT
FOR THE CONSTRUCTION OF A FERTILIZER PLANT AND
GUIDELINES FOR THEIR USE

Progress Report and Features of the Model Contracts on
which International Agreement could be reached
at the Second Consultation Meeting*

by the UNIDO Secretariat

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id.78-5576

CONTENTS

	<u>Page</u>
A. FOLLOW-UP ACTIVITIES RECOMMENDED BY THE FIRST CONSULTATION MEETING	3
B. THE NEED TO PREPARE MODEL FORMS OF CONTRACT FOR USE BY DEVELOPING COUNTRIES	4
C. UNIDO'S APPROACH TO PREPARING FIVE DIFFERENT FORMS OF MODEL CONTRACT	4
D. PREPARATION OF GUIDELINES ON THE USE OF UNIDO MODEL FORMS OF CONTRACT	6
E. THE ESTABLISHMENT OF A WORKING GROUP AT THE CONSULTATION MEETING	6
F. FEATURES OF THE UNIDO DRAFT FORMS OF MODEL CONTRACT ON WHICH INTERNATIONAL AGREEMENT COULD BE REACHED	7
G. APPROACH THAT COULD BE ADOPTED IN FINALISING THE TEXT OF THE OTHER FOUR MODEL FORMS OF CONTRACT	12

ANNEXES

A. Uniform List of 46 Articles included in the different model forms of Contract for the construction of a fertilizer plant	13
B. Checklist of technical annexures to the contract	15
C. Preliminary Draft of Guidelines for the use of UNIDO model forms of contract for the construction of a fertilizer plant	17

A. FOLLOW-UP ACTIVITIES RECOMMENDED BY THE FIRST CONSULTATION MEETING

1. At the First Consultation Meeting the discussion on model contracts was summarized as follows:

"There was general agreement that the work done by UNIDO on model contracts would be of interest to many countries, particularly those in the early stages of development. However, because of the variety of local circumstances legal systems, and economic and managerial capabilities, no single model would be universally applicable. Nevertheless, the Meeting suggested that UNIDO should continue its investigations into alternative forms of contracts and should suggest guidelines for the developing countries' use. A variety of contracts, including turn-key and semi-turn-key contracts, and contracts for engineering services only, process know-how and some capital equipment could be considered at the same time" (paragraph 39, ID/WG/242/8/Rev.1).

2. It therefore proposed the following subject for more intensive examination and investigation:

"Contract procedures intended to ensure the successful construction and operation of fertilizer plants and the suggested multilateral insurance scheme intended to ensure the protection of the interests of all parties concerned by providing, in particular, adequate compensation for consequential losses" (paragraph 64).

3. As a first step, UNIDO convened a Technical Seminar on Contracting Methods and Insurance Schemes for Fertilizer and Chemical Process Industries in Lahore, Pakistan from 25-29 November 1977. The Seminar considered precontracting and contracting methods, guarantees and penalties, arbitration, insurance and model contracts.^{1/}

4. As a second step, a Working Group on Contracts and Insurance for Fertilizer Plants was convened in Vienna from 14-17 February 1978. Since contract procedures had been dealt with at the Lahore Seminar, this meeting concentrated on the possibility of establishing an insurance scheme to provide adequate compensation for consequential losses.^{2/}

^{1/} See Report of the Meeting, ID/WG.259/26/Rev.2.

^{2/} See Report of the Meeting, ID/WG.269/2/Rev.1.

B. THE NEED TO PREPARE MODEL FORMS OF CONTRACT FOR USE BY DEVELOPING COUNTRIES

5. The Lahore Seminar found that the current model forms of contracts that exist today are not entirely suitable for use by developing countries for the construction of fertilizer plants. In order to protect the interests of both purchaser and contractor in entering into a contract, it is necessary that certain fundamental technical, legal and contractual safeguards be maintained for their mutual protection. The Seminar therefore proposed that UNIDO should develop model forms of contract.

6. It was recognized that contracts used in the past in developing countries contain fundamental weaknesses in contractual and legal terminology which have worked to the detriment of both parties. In particular, there has been inadequate use of (a) legal securities available by way of bonds and other instruments which may be used to secure contractor performance and (b) suitable technical guarantees and system warranties of the plant and technology. Accordingly, as a first step toward the development of model forms of contract, it is necessary to draft new provisions to sustain the rights of contractor and purchaser of plant and technology.

7. The Lahore Seminar concluded that one of four principal types of contract would probably be used by a developing country:

- (a) turn-key lump-sum
- (b) cost-reimbursable
- (c) semi-turn-key
- (d) supply of process know-how and engineering services.

UNIDO should prepare model forms of these types of contract and accompanying guidelines to facilitate their use.

C. UNIDO'S APPROACH TO PREPARING FIVE DIFFERENT FORMS OF MODEL CONTRACT

8. UNIDO requested the assistance of consultants experienced in the preparation and use of contracts to prepare five different

model forms of contract. The consultants were:

- Instituto Mexicano del Petróleo; Mexico
- National Design and Industrial Services Corporation Limited; Pakistan
- State Organization of Industrial Design and Construction; Iraq
- The Fertilizer Corporation of India Ltd.; India
- The Commercial Director Chemokomplex Hungary
- A consultant on the legal aspects of international technology contracts; Canada

9. This group of consultants met three times with UNIDO staff in April, June and August 1978. In this way, they were able to adopt a uniform approach to the preparation of model forms of contract for the following five types of contract:

- (a) Turn-key lump-sum contract that covers supply of process know-how, engineering services, procurement of machinery, equipment and materials, civil works and erection. The contractor alone is responsible for all work up to the final acceptance test; he accepts full responsibility for the plant's performance. The work is performed for a fixed total price.
- (b) Cost-reimbursable contract that covers most of the services included in the turn-key lump-sum contract. The contractor's responsibilities are more limited in some areas such as procurement. Know-how, engineering and procurement assistance are provided for a fixed fee; all other costs are charged on a reimbursable basis.
- (c) Semi-turn-key contract that covers supply of the same services as in the turn-key lump-sum contract above but excluding civil works and erection at site for which the purchaser is responsible. Most of the work is performed by the contractor for a fixed fee. The contractor accepts responsibility for the plant's performance but not for completion on time.
- (d) Supply of know-how and engineering services that covers supply of the process know-how, basic engineering, procurement assistance and assistance with supervision of the construction of a single plant. The contractor accepts responsibility for the plant's performance.
- (e) Supply of know-how and engineering services that covers the same services as (d) above but for a number of similar plants at the same or other locations.

10. The second form of model contract - (b) cost reimbursable - will be presented to the Second Consultation Meeting as the preliminary draft of this form of Model Contract. If agreed by the Consultation Meeting this form of model contract will be recommended for use by developing countries who prefer to use the cost reimbursable type of contract.

11. The other four forms - (a), (c), (d) and (e) above - of model contract will be presented to the Second Consultation Meeting as background documents in the form in which they were submitted to UNIDO by the consulting institution or person which prepared them. If interest is shown, UNIDO intends to develop those drafts into forms of Model Contract that UNIDO can present.

D. PREPARATION OF GUIDELINES ON THE USE OF UNIDO MODEL FORMS OF CONTRACT

12. In addition a preliminary draft of Guidelines on the Use of UNIDO Model Forms of Contract has been prepared by UNIDO. It will be submitted to the Consultation Meeting as a background document. It covers the choice of the type of contract to use and various aspects of (a) pre-contracting procedures, (b) preparing and negotiating a contract, (c) methods of management of construction of the plant and (d) training manpower to operate the plant. Annex C details the contents.

13. The above paragraphs summarise the progress made by UNIDO in preparing five forms of model contract (agenda item 3 (a)).

E. THE ESTABLISHMENT OF A WORKING GROUP AT THE CONSULTATION MEETING

14. The following paragraphs deal with some of the essential features of the UNIDO model form of cost reimbursable contract on which international agreement might be reached at the Consultation Meeting in order to protect the interest of purchasers and contractors.

15. To consider these features, provision has been made to establish a Working Group at the Consultation Meeting which can meet in a meeting room with interpretation facilities away

from the Plenary Session (See Aide-Memoire on the Meeting, paragraph 12). In the following paragraphs, the term "The Working Group" refers to this working group which it is intended to establish at Innsbruck.

F. FEATURES OF THE UNIDO DRAFT FORMS OF MODEL CONTRACT ON WHICH INTERNATIONAL AGREEMENT COULD BE REACHED

16. These five forms of model contracts have been drafted following the uniform list of 46 main articles listed in annex A, that was drawn up by the participating consultants. The Working Group is invited to review the list of 46 articles and comment on the adequacy of the coverage they provide. Annex B provides a checklist of technical annexures to the contract.

17. In addition, the Working Group may consider and finalize the model form of a cost reimbursable contract. Particular attention may be given to the following articles.

18. Article 2. The scope of the contract requires the contractor to prepare a critical path analysis and establish milestones at various stages of completion of the project. In this way, the obligations of both contractor and purchaser to ensure completion on time will be made clear from the outset. The Working Group might endorse the specific inclusion of this approach in the contract.

19. Article 3. The scope of the work provides detailed description of the scope of the work under a number of headings relevant to the type of contract. The comprehensive approach adopted in this article could be endorsed by the Working Group.

20. Article 4. Obligations of the Contractor provides that for the period of one year after the final acceptance, the contractor shall remain responsible to correct the plant in case the plant is unable to give production at the rated capacity or the capacity that form the basis of final

acceptance on account of faults in design and equipment, specifications, process and failure of material which was not evident or which could not have been reasonably inferred at the time of test. Such corrections would be without charge to the purchaser. The article also makes the contractor responsible for the performance of the plant measured in terms of the production achieved in the first year of operation. The Working Group may consider whether the form in which this article is drafted is sufficient and acceptable.

21. Article 6. Co-operation and co-ordination between the contractor and purchaser recognises the need to ensure that the contract is implemented in a spirit of co-operation between the purchaser and the contractor. The Working Group may consider whether this is sufficient or whether a code of conduct of good contracting practice should be drawn up as recommended by the Lahore Seminar.

22. Article 11. Prices and Terms of Payment describes the payments to be made at various stages of the contract's implementation, the mode of payment and the documents against which such payment are to be made. The Working Group is invited to agree on the manner in which the terms of payment are specified.

23. Article 12. Performance bonds and bank guarantees should be read bearing in mind that the Lahore Seminar noted that:

"Performance bonds of 8 to 10 per cent and even up to 15 per cent are requested and given in present conditions. Since performance bonds of 25 per cent or more are used in the United States in construction, engineering and defence industry contracts, it was suggested that this level might also be considered for contracts to construct fertilizer plants in developing countries".

In the model contract, no specific percentage is suggested as this will depend on negotiations between the two parties,

the scope of the contractor's obligations and other circumstances particular to each contract. The Working Group may wish to consider what size of bond would adequately protect the purchaser against the failure of the contractor to implement the contract in the case of turn-key lump-sum and cost reimbursable contracts.

24. Article 19.3. Guarantees and performance guarantee tests calls for the contractor to provide two types of guarantees (a) guarantees subject to penalties, covering delay in plant completion and consumption of raw materials and utilities; (b) guarantees where the obligation of the contractor to meet the guarantees is unlimited. Such guarantees are restricted to the capacity of the plant and the quality of the product. The Working Group is invited to discuss and endorse the concept of the two types of guarantee which were recommended by the Lahore Seminar.

25. Article 19.8. Performance Guarantee Tests calls as a minimum for 20 days sustained continuous operation at 90 per cent capacity followed by a test period of 10 days operation at 100 per cent capacity. The Working Group may consider whether these minimum periods are sufficient.

26. Article 20. Conditions of Acceptance make specific provision for the contractor to ensure that after the final acceptance the plant is made capable of producing at the specified capacity by rectifying defects, replacing parts or adding to the plant as is found to be necessary.

27. Article 21. Warrantees provides for the contractor to obtain from vendors of machinery and equipment, mechanical guarantees and warrantees for 12 months from the effective date of start up or 24 months from the last date of shipment, whichever is earlier. The Working Group may consider whether the concept of the last date of shipment is a useful one; current

practice is reported to be 18 to 30 months from the last date of shipment, but this period is not adequate for developing countries. The Working Group might discuss and agree that the period should be 12 months after final acceptance of the plant.

28. Article 22 Penalties and Article 23 Liquidated Damages limit the liability of the contractor to the penalties stipulated in the contract. Liquidated damages of up to 10 per cent of the contractor's fixed fees are provided for in the cost reimbursable model for failure to meet the technical guarantees; if failure to meet other contractual obligations is included, liquidated damages can rise to 15 per cent. The Working Group may wish to consider whether these levels, which reflect the recommendations of the Lahore Seminar, are adequate.

29. Article 24. Bonuses and Incentives offer the contractor a bonus for early completion. The Working Group may wish to endorse this approach.

30. Article 26. Insurance describes the insurance cover that should be taken out and the rights of the purchaser to examine such insurance policies taken out by the contractor. The new feature is the taking out by the purchaser and contractor of a policy to provide insurance cover for consequential losses resulting from defects in design and equipment. This is the clause that was drafted by the Working Group on Contracts and Insurance in February 1978 for inclusion in the UNIDO model contracts. The Working Group may wish to agree to the inclusion of this clause.

31. Article 28. Variations, changes and additions to scope of work of the cost reimbursable contract provides an upper limit price for the total cost of the plant (excluding financing charges); beyond this limit the contractor agrees to share additional costs with the purchaser. The Working Group is invited to consider whether this form of providing for some control over the total cost of the cost reimbursable contract is adequate and to consider a quantum which could be acceptable to the two parties.

32. Article 30. Secrecy provides that 10 years after the effective date of contract all secrecy provisions shall expire on the supply of know-how and engineering. The Working Group may consider whether this period could be reduced in the UNIDO model contracts to permit greater sharing of experience amongst developing countries.

33. The purchaser should have the right after final acceptance to undertake any modification of the plant on his own responsibility if, in his opinion, such modifications will represent an improvement in the operation of the plant or is required to balance, modernise or expand the plant.

Article 30. Secrecy therefore provides that if the contractor is either unwilling or unable (in the opinion of the purchaser) to assist in making the modification which the purchaser wishes to make, he may employ another person or consultant without being deemed to have infringed the Secrecy provisions.

34. In article 34. Force Majeure the wording of an article that has been used in some current contracts has been incorporated. Bearing in mind the important implications of this clause, it should be discussed by the Working Group.

35. Article 45. Settlement of disputes and Article 46. Arbitration take into account discussions at the Lahore Seminar where it was agreed that the interests of developing countries should be better protected. The Seminar recommended, inter alia, that

- Provision should be made in the contract for a conciliation procedure, in order to avoid arbitration whenever possible.
- The language for arbitration should be agreed upon in the contract.
- The governing law of the contract should be clearly specified. In the case of turn-key or cost reimbursable contracts, the laws of the country where the plant is to be built will be used as far as possible.

- In order to reduce cost and time, it would be desirable to have only one arbitrator accepted by owner and contractor as far as possible. Otherwise three.
- Experts from developing countries should be included on the arbitration panels of the International Chamber of Commerce and other arbitration organizations or courts.^{3/}
- Consideration should be given to appending to the contract a supplementary document in which the procedure and action to be taken in settling disputes be clearly stated. ^{4/}
- The need for multilateral treaties to facilitate the enforcement of arbitration awards in the countries that are parties to the said treaties.

36. Bearing in mind that there are many centres in the world to which arbitration on international contracts is referred, it would be useful to discuss Articles 45 and 46 of the model contract in the Working Group and reach a clear agreement.

G. APPROACH THAT COULD BE ADOPTED IN FINALISING THE TEXT OF THE OTHER FOUR MODEL FORMS OF CONTRACT

37. The work of preparing a preliminary draft of the five model forms of contract to be recommended by UNIDO was carried out by consultants who met three times to agree a uniform approach and review each other's work.

38. After the review of the model form of cost reimbursable contract by a Working Group at the Consultation Meeting this UNIDO model form of contract will be published.

39. The Consultation Meeting is invited to consider whether the preliminary draft of the other four model forms of contracts will require further review before publication and if so what type of forum will be required to review them prior to publication.

^{3/} For example when the International Chamber of Commerce (ICC) appoints an arbiter for industrial disputes, it may refer to any of its national committees in more than 50 countries throughout the world for the proposal of a suitable person; however the majority of appointees have so far come from developed countries.

^{4/} UNIDO has begun to prepare such a supplementary document for possible inclusion in the model contracts. The Working Group might consider whether such a document would be useful.

ANNEX A

Uniform List of 46 Articles included in the
different model forms of Contract for the
construction of a fertilizer plant

Preamble

1. Definitions
2. Scope of the Contract including Time Schedule
3. Scope of work (see detailed list of contents)
4. Obligations of the Contractor
5. Obligations of the Purchaser
6. Co-operation and Co-ordination between Contractor and Purchaser
7. Assignment of Contract
8. Supervision of the Work
9. Access to Work
10. Procurement (where applicable)
11. Prices and Terms of Payment
12. Performance Bonds and Bank Guarantees
13. Effective Date of Contract
14. Time of Essence
15. Completion of Work
16. Extension of Time
17. Materials and Workmanship
18. Inspection, Testing and Certification
19. Guarantees and Performance Guarantee Tests
20. Conditions of Acceptance
21. Warrantees
22. Penalties
23. Liquidated Damages
24. Bonuses and Incentives
25. Liabilities
26. Insurance
27. Rectification of Defects
28. Variations, Changes and Additions to Scope of Work
29. Right for Use of Proprietary Rights and Licences
30. Secrecy
31. Patents

32. Disclosures
33. Indemnification
34. Force Majeure
35. Suspension of the Work
36. Termination of the Contract
37. Cancellation of the Contract
38. General Provisions
39. Accounting and Inspection of Records (where applicable)
40. Determination of reimbursable costs
41. Language governing the Contract
42. Applicable Laws and Conformity with local Statutes
43. Standards and Codes
44. Notices
45. Settlement of Disputes
46. Arbitration

Annexes

ANNEX B

Checklist of technical annexures to the contract

- I. Brief description of the plant
- II. Basis of design
 - (i) Raw material specifications
 - (ii) Meteorological data
 - (iii) Soil conditions
 - (iv) Codes and standards
 - (v) Statutory regulations (boiler etc.)
 - (vi) Limitation on transportation of equipment
 - (vii) Definition of battery limits
 - (viii) Characteristics of utilities and services and limits of supply
 - (ix) Effluent standards; emission standards
- III. Definition of the battery limits (a drawing)
- IV. Design criteria agreed
- V. Document requiring approval of the buyer
- VI. Detailed description of services to be performed by contractor
- VII. Detailed description of services to be performed by purchaser
- VIII. Scope of delivery, including list of equipment and equipment specifications
- IX. List of catalysts
- X. List of spare parts
- XI. List of chemicals
- XII. List of prequalified vendors of critical equipment items
- XIII. Exclusions from the scope of delivery
- XIV. Scope of delivery of the purchaser
- XV. Time schedule of implementing each stage of the contract
- XVI. Quality of products
- XVII. Quality and quantity of effluent
Effluent standards; emission standards
- XVIII. Technical training of buyer's personnel

- XIX. Procedures for changes in scope of work
- XX. Pre-operating procedures and procedures for guarantee tests
- XXI. Manuals
 - (a) for operation, maintenance and safety
 - (b) for monitoring environmental aspects
 - (c) for chemical analytical methods
 - (d) for lubrication
 - (e) for instrumentation
 - (f) vendor's pamphlets, operational and maintenance manuals and drawings
- XXII. Form of performance bonds
- XXIII. Form of bank guarantees
- XXIV. Packing, shipping and marking instructions
- XXV. Storage at site, general and marking instructions
- XXVI. Procurement procedures (where appropriate)
- XXVII. Schedule of rates and charges and terms and conditions of expert services

ANNEX C

Preliminary Draft of
Guidelines for the use of UNIDO model forms of contract
for the construction of a fertilizer plant

CONTENTS

Introduction

1. THE FIVE TYPES OF MODEL FORM OF CONTRACT BEING PREPARED BY UNIDO.
2. UNIDO'S APPROACH TO PREPARING THE MODEL FORMS OF CONTRACT.
3. PREREQUISITES FOR USING EACH TYPE OF MODEL FORM OF CONTRACT.
4. POINTS TO CONSIDER WHEN SELECTING THE PARTICULAR TYPE OF CONTRACT TO BE MADE.
5. EVALUATION OF BIDS BY PURCHASER AND NEGOTIATIONS LEADING UP TO THE SIGNING OF THE CONTRACT.
6. SOME MAJOR TECHNICAL POINTS THAT SHOULD BE COVERED BY THE CONTRACT.
7. SOME MAJOR COMMERCIAL AND LEGAL POINTS THAT SHOULD BE COVERED BY THE CONTRACT.
8. ROLE, FUNCTIONS AND LIABILITIES OF THE CONSULTING ENGINEER IN DRAWING UP AND SUPERVISING IMPLEMENTATION OF A CONTRACT.
9. METHODS OF MANAGING THE CONSTRUCTION OF A FERTILIZER PLANT.
10. TRAINING OF PERSONNEL TO OPERATE A FERTILIZER PLANT.



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