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UNITED NATIONS INDUSTRIAL
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# SECOND MEETING OF THE WORKING GROUP ON MODEL CONTRACTS FOR FERTILIZER PLANTS

Vienna, 19 - 23 June 1978

## REPORT OF THE MEETING*

* This report has been reproduced without formal editing.

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1. The representatives of 4 collaborating institutions and 2 individual consultants co-operating in this project are listed in Annex A.

2. The meeting reviewed the 4 forms of model contract prepared by the co-operating institutions and compared them with than being drafted by Mr. Tatar of Chemokomplex, Hungary. The respective responsibilities of the contractor and purchaser in these 5 forms of contract are shown in a table attached as Annex B. It was appreciated that such a table only gives a partial indication of the differences in the approach of the 5 different forms of contract.

3. The main purpose of this second meeting was to discuss how the 5 different authors of model forms of contract could harmonize their approach and go some way towards adopting uniform terminology.

4. It was agreed that the terms 'contractor' and 'purchaser' should be used rather than 'buyer' and 'seller'. In the case of Iraq a designation would be 'purchaser (employer)' and in Hungary 'purchaser (client)' so as to respect the terms normally used in these countries.

5. The main articles of the model contracts were discussed. It was agreed that each contract should include all of the articles in Annex C and that they should be presented in exactly the same order as the clauses are listed in the Annex. In addition, the articles should be numbered as in Annex C so as to facilitate a comparison of the wording of the same clause in the different forms of contract. The 'scope of work' article was further clarified by agreeing the list of contents as shown in Annex D.

6. It was decided that for the Second Consultation Meeting, 6-10 November 1978 it would only be possible to provide a list of the technical annexures to a contract. The revised list of annexures agreed by the meeting is attached as Annex E. This will be available in UNIDO for reference.

7. As well as agreeing on a list of the articles traditionally included in a contract, the meeting discussed new clauses which might be added to improve the existing form of contracts. This was discussed in response to a request made by Mr. Hacini, Head of the Negotiations Section, that these model contracts would form the framework of the relationship between the contractor and

purchaser and that they need to be considered in this context. Suggestions of clauses that would improve the existing form of contracts that could be discussed at the Consultation Meeting would be welcome. A list of such articles suggested by the meeting is attached as Annex F. The meeting agreed that these articles should be circulated by UNIDO to about 10 contractors inviting comments for consideration by the New Delhi meeting.

8. UNIDO would also present to the Consultation Meeting a draft of a paper entitled "Guidelines for the use of Model Contracts". This would be drafted by Mr. Verghese following his retirement from UNIDO on 30 June 1978, on the basis of the contributions of those drafting the model contracts and discussions at previous working meetings and seminars. In this connection, participants were given a copy of the report of the Technical Seminar on Contracting Methods and Insurance Schemes for Fertilizer and Chemical Process Industries, held in Lahore, Pakistan from 25-29 November, 1977. A suggested outline was agreed (see Annex G).

9. The meeting discussed the way in which technical specifications should be prepared and presented by UNIDO.

10. Four of the authors of the model contracts agreed to adhere to the time-table imposed on them by UNIDO, i.e. that they would complete a revised draft by 31 July; the representatives of Iraq promised to inform UNIDO whether they could adhere to the timetable after consulting their organization.

11. One copy of the revised model contracts would be sent to Mr. Verghese at the following address: Mr. M.C. Verghese, 'Mallila', 60 Taylors Road, Kilpauk, Madras 6000-10, India, and two other copies to UNIDO. The other nine copies would be brought to the New Delhi meeting.

12. Mr. Subramaniam, consultant to UNIDO on the legal aspects of the contracts, would then review the 5 model forms of contract in the first 3 weeks of August. There would then be a meeting in New Delhi from 21-25 August at which there would be a final review which would attempt to harmonize the articles of each contract as much as possible. It would be the job of the UNIDO consultant on legal aspects of the model forms to ensure that uniform terminology was used as far as possible.

13. Following this meeting, the model contracts would be reproduced by UNIDO as a background document for the Second Consultation Meeting to be held in Innsbruck from 6-10 November 1978.

14. The contact point for the New Delhi meeting would be Mr. T.R. Ardhanari who could be contacted at the following addresses:

Contact Point:

T.R. ARDHANARI
Attn: Dr. P.V. JOHN
Fertilizer Corporation of India Ltd.
55, Nehru Place,
New Delhi 110024

Cable: FERTILIZER
Telex: 031-2859, New Delhi
Phone: 634001

Sindri Address:

T.R. ARDHANARI
Deputy General Manager,
Fertilizer (Planning and Development India Ltd)
Sindri (Dhanbad Dt.)
Bihar
India 828122

Cable: PLANDEV
Telex: 029-216
Phone: 60110/60160 JHARIA

15. All participants would advise him by telex of their arrival time and hotel requirements. Mr. Ardhanari will circulate to all participants by 31 July the place of the meeting and the time it should start as well as to confirm what hotel rooms would be available.

ANNEX A

| LIST OF PARTICIPANTS | TYPE OF MODEL CONTRACT |
|---|---|
| Dr. A.K. Qureshi<br>General Manager<br>National Design and Industrial Services Corporation Limited,<br>Hotel Ambassador Building,<br>Lahore,<br>PAKISTAN | Cost Reimbursable |
| Mr. M.H. Al-Shukri<br>Director,<br>Fertilizer Industries,<br>State Organization of Industrial Design and Construction,<br>Ministry of Industry and Minerals,<br>Government of Iraq<br>Baghdad,<br>IRAQ | Turn-key/Lump-sum/Battery limits |
| Mr. Adnan A. Al-Ani<br>Director<br>Petrochemical Industries<br>State Organization of Industrial Design and Construction,<br>Ministry of Industry and Minerals,<br>Government of Iraq,<br>Baghdad,<br>IRAQ | " " " |
| Dr. S. K. Mukherjee<br>Director,<br>The Fertilizer Corporation of India Ltd.,<br>55 Nehru Place,<br>New Delhi 110024<br>INDIA | 'Know-how and Engineering Services for a fertilizer plant based on fuel oil' |
| Mr. T.R. Ardhanari,<br>Fertilizer (Planning + Development) India Limited,<br>Sindri,<br>Bihar,<br>INDIA | " " " |
| Mr. O. Ruiz Carmona<br>Jefe de la Div. de Proceso<br>Sub-Direccion de Ingenieria de Proyecto<br>Instituto Mexicano del Petroleo,<br>Av. de Los Cien Metros No. 152<br>Mexico 14 D.F.<br>MEXICO | Construction of a set of duplicate fertilizer plants |

| | |
|---|---|
| Mr. I. Tatar,<br>Commercial Director,<br>Chemokomplex,<br>Budapest,<br>HUNGARY | Lump-sum with erection undertaken by the purchaser |
| Mr. D. Subramaniam,<br>Legal Consultant,<br>89 Queen Court,<br>Hillsdale,<br>New Jersey 07642<br>UNITED STATES OF AMERICA | Legal consultant for contracts for fertilizer and chemical process plants |

UNIDO STAFF MEMBERS

Mr. M.C. Verghese
Head Chemical Industries Section
Industrial Operations Division

Mr. R. J. Line
Negotiations Section
Division of Policy Co-ordination

Mr. P. Rodrigues,
Negotiations Section
Division of Policy Co-ordination

| | TYPE 1<br>LUMP SUM<br>TURN KEY<br>BATTERY LIMITS<br>(IRAQ) | TYPE 2<br>LUMP SUM<br>BUYER RESPONSIBLE<br>FOR ERECTION<br>(HUNGARY) | TYPE 3<br>REIMBURSABLE<br>COST<br>(PAKISTAN) | TYPE 4<br>DUPLICATE<br>PLANTS<br>(MEXICO) | TYPE 4<br>BASIC<br>ENGINEERING<br>(INDIA) |
|---|---|---|---|---|---|
| **SUPPLIER RESPONSIBLE** | | | | | |
| Know-how | ✓ | ✓ | ✓ | ✓ | ✓ |
| Basic Eng. | ✓ | ✓ | ✓ | ✓ | ✓ |
| Detailed Eng. | ✓ | ✓ | ✓ | ✓ | ½ |
| Procurement | ✓ | ✓ | ✓ | ½ | ½ |
| Erection | ✓ | - | supervision only | - | supervision |
| Commissioning | ✓ | ✓ | ✓ | ✓ | ✓ |
| Training | | | | | |
| Spare parts | | | | | |
| **BUYER RESPONSIBLE** | | | | | |
| Site | ✓ | ✓ | ✓ | ✓ | ✓ |
| Civil Works | - | ✓ | ✓ | ✓ | ✓ |
| Utilities (OBL) | ✓ | ✓ | - | ✓ | ✓ |
| Erection | - | ✓ | ✓ | ✓ | ✓ |
| Detailed Eng. | - | - | - | - | ½ |

ANNEX C

## List of Main Articles of the Contract

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. Warranties
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

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List of Annexures

Article 3. ANNEX D

Scope of Work (Responsibility of Purchasers and Contractors)

1. Design basis (based on atmospheric conditions,
soil conditions,
raw materials specifications and quantities,
final product specifications and quantities,
specifications for utilities,
effluent and emission standards,
limitation of weight and transportation of equipment)

2. Basic engineering

a) Layout
b) Process flow sheet
c) Materials and heat balances
d) Instrumentation
e) Electric distribution
f) Environmental aspects

Abstract from p.7 of model contract from India

3. Detailed engineering

4. Equipment list and specifications
Abstract from p.1 of Iraqi model contract

5. Inspection and test certificates of equipment and materials

6. Procurement of equipment and materials

7. Packing, markings, freight transporation, insurance, loading, unloading, delivery to site

8. Storage of equipment and materials

9. Soil investigation and site preparation

10. Construction of civil engineering works

11. Erection of equipment and machinery

12. Test certificates

a) Testing of individually erected equipment;
b) Testing of the whole erected plant, section by section and as a whole

13. Commissioning

a) Procedure and criteria for measurement of qualities and quantities of raw materials, utilities and products;

b) Supervision during the guarantee period;

c) Start up and guarantee test runs:

20 continuous days of 85 per cent of rated capacity on the baris of commercial operation followed by 10-day test runs.

d) Performance test certificates;

e) Report on the history of construction and erection and test runs.

17. Spare parts for two years normal operations, consumables, spare catalysts, chemicals and other materials .....

18. Training

19. Provision of drawings, specifications and manuals and test certificates of equipment in fabrication shops and tests of materials for construction for critical items

ANNEX E

## LIST OF TECHNICAL ANNEXURES

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 and 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 drawinge

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 F

2. Additional Clauses to be included in Model Contracts

(1) The contractor shall render assistance for a consideration after the purchaser has taken over the plant after completing satisfactorily the test runs both for operation and maintenance guaranteed by bonds.

(2) Contractor to supply the purchaser with new processes or developments during the course of 2 to 5 years after completion of the contract.

(3) In the case of engineering and know-how contract, a clause to have unlimited liability by the contractor to ensure successful completion of the project based on their know-how, in the event of non-fulfillment of the capacity of the plant due to inadequate design or due to mistakes in design.

(4) Commitment of the contractor for completeness of their supply

The contractor is responsible for the completeness of the plant within the battery limit. This commitment means the following: The present contract contains the Appendix No.... which indicates the scope of delivery of contractor. However, it cannot be considered as being exhaustive, whereas the Appendix No.... embraces the itemized specification of purchaser's supply which is an exhaustive one. Should it become obvious, during the erection works and/or the commissiong of the plant that some equipment and/or any of the erection materials, etc., are missing or replacement for whatsoever needed for the commercial operation of the plant under the contract, the contractor has to supply them in the frame of the lump sum price as defined in para..... of the present contract if it had not been indicated expressly in the Appendix No.... enumerating the scope of supply of buyer in an exhaustive form.

(5) The contractor is also responsible for those items which are reasonably inferred from the contract. (Indian contract, p.8, para 322)

(6) For a period of one year after the plant has been accepted, the contractor shall be responsible to correct the plant free of additional costs, in case it is unable to give production at rated capacity on account of latent faults in design/equipment specification/process which did not show up at the time of guarantees tests.

(7) The contractor within a period of two months from the effective date of contract will draw up the following requirements for plant erection and operation:

i) The number, trades and level of personnel which will be rationally required:

- at different stages of erection work;
- during normal operation and maintenance of the plant;

ii) The minimum number, type and size of major erection equipment and the specific period for each will be needed for the erection of the plant.

(8) The contractor shall ensure that reasonable number and level of training (to be arranged by the contractor within or outside the country of the purchaser) of the purchaser's personnel is adequate for smooth operation and maintenance of the plant in good condition.

(9) The contractor shall submit the following reports periodically:

i) Monthly reports (with CPM) on progress of work (adopt World Bank format) and funds incurred/committed (in purchase orders) upto the erection stage;

ii) Bi-monthly reports (with CPM monthly basis) on progress of work and funds spent/committed during erection period (separately for erection and purchases).

(10) Technical Services

After five years of start up of the plant the contractor has to answer questions related to the operation of the plant. As promptly as possible after receipt of such enquiries, contractor will respond as completely as possible It is understood that there will be no limitations on the number and that the purchaser will resolve his basic problems on operation through the contractor.

Independently of the specific questions asked by the purchaser, the contractor after the approval of the purchaser will send an adviser to visit the plant and review its operation suggesting ways to improve its operation at least once a year.

(11) Sales Territory

The purchaser has the right to sell the products and intermediates in the international market without any restriction imposed by the contractor.

(12) Purchaser participation during engineering design

If the purchaser is willing to participate in the engineering design, process and detail, he is going to establish so during the bidding and his participation must be established clearly under the contract.

(13) Modifications and Expansion of the Plant

The purchaser has the right to do any modifications, on his own responsibility, to the plant after commissioning, using the services of another contractor when he feels that those modifications will represent an improvement in the operation of the plant or are the requirement for an expansion of it.

(14) Responsibility of the Consultant(engineer) to the Client (Purchaser)

The consultant retained by the purchaser or owner should be obliged to provide adequate safeguards by way of indemnities and insurance coverages to the benefit of the purchaser or owner to ensure that damages and/or costs may be available for negligence, defaults and/or omissions on the part of the consultant(engineer).

(15) Proprietary Licence Privileges and Secrecy Agreements

The contractor should be obliged to provide guarantees to the purchaser relative to the continued use of know-how and (patented) processes etc., over an adequate period of time without prejudice to any matter occurring which might inhibit the continued use of the acquired know-how and processes.

# GUIDELINES FOR THE USE OF MODEL CONTRACTS

## Outline suggested by the Meeting

1. Essential elements of five types of contract presented by UNIDO

2. Pre-requisites for using each type of contract

3. Major considerations for the selecting of a particular type of contract to use.

4. Some major technical points that should be covered by the contract.

5. Some major commercial and legal points that should be covered by the contract - draft by D. Subramaniam

6. Steps to be taken leading up to the signing of a contract (including criteria for selecting contractors to be drafted by IMP, Mexico)

7. Role, functions and liabilities of the consulting engineer in drawing up and supervising implementation of a contract.
   Role and Functions to be drafted by M.C. Verghese
   Liabilities to be drafted by D. Subramaniam

8. Role of the legal adviser in assisting the purchaser to use a model form of contract - to be drafted by D. Subramaniam

9. Main points subject to negotiation in contracts.

10. Management of the construction of a fertilizer plant (to be drafted by FCI, India)

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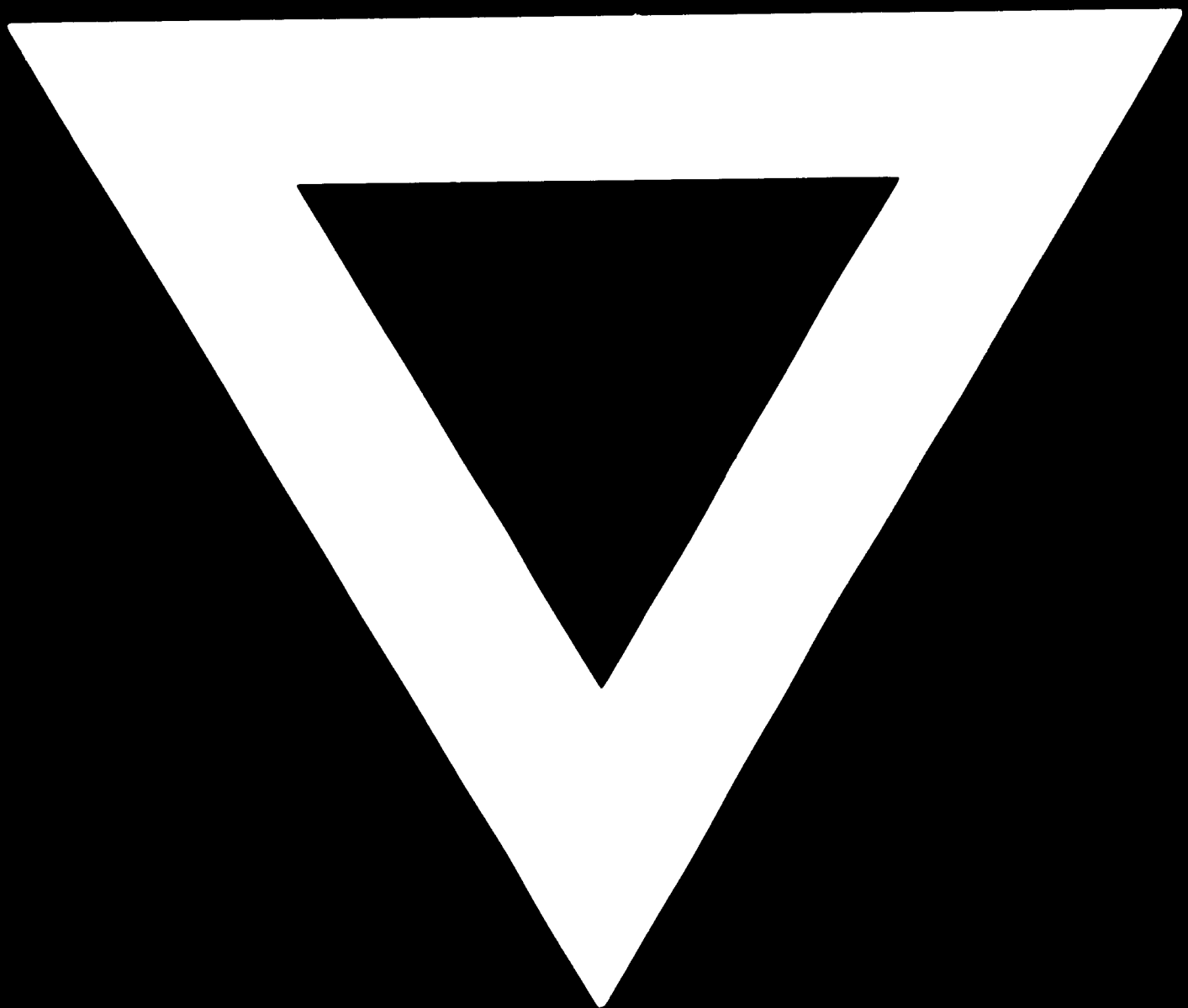

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