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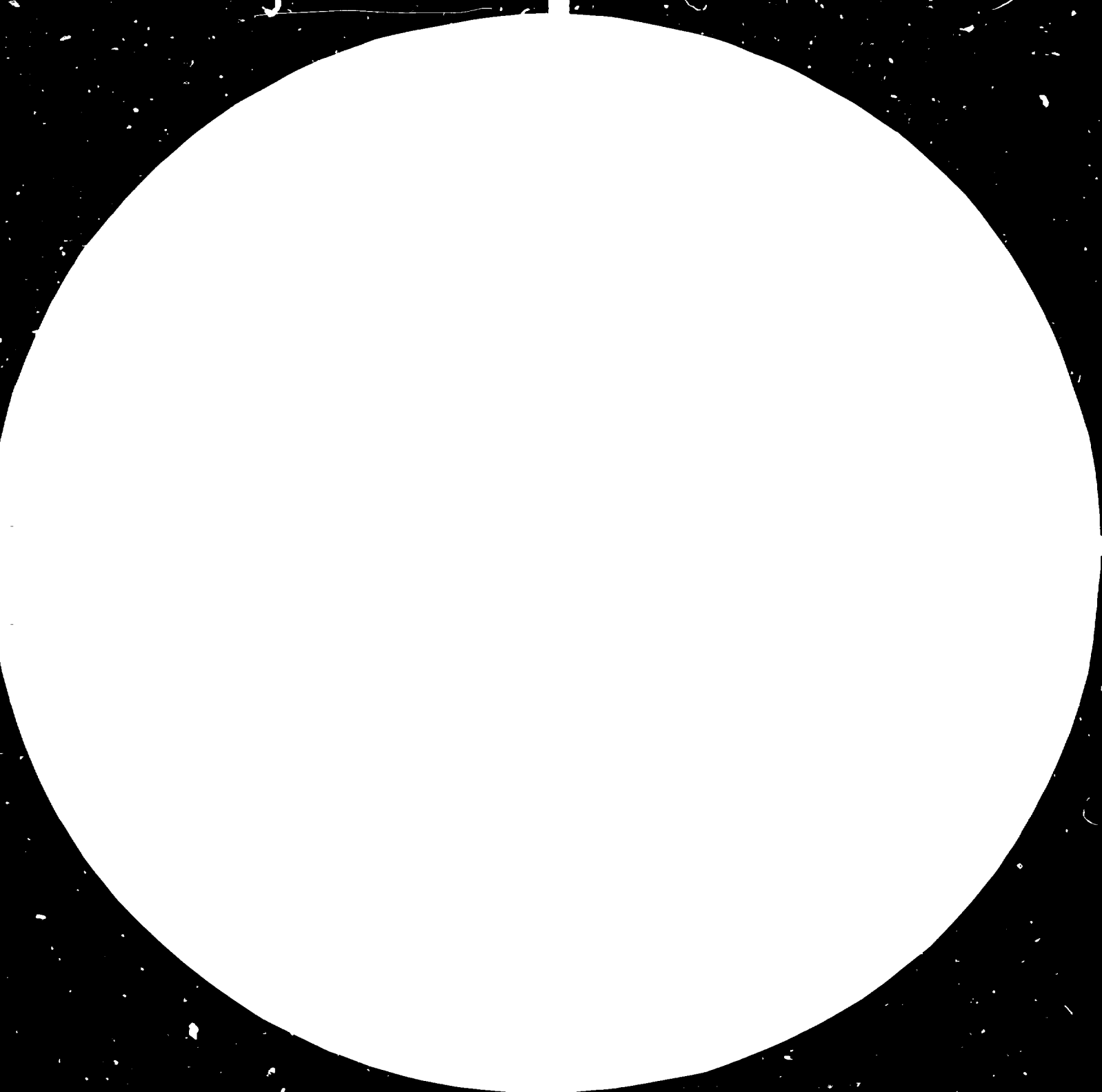
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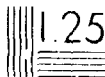
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*In Kermanshah*

11461



*Iraq.* **ASSISTANCE  
TO INDUSTRIAL ESTATES**

TF/IRQ/79/OC1/UNIDO

Post:11-01/31.3.E

**PROJECT FINDINGS AND RECOMMENDATIONS**

**MISSION TERMINAL REPORT  
SUPPLEMENTARY TO REPORT No.15**

Prepared for

THE GOVERNMENT OF IRAQ,  
STATE ORGANIZATION FOR INDUSTRIAL DEVELOPMENT  
DIRECTORATE GENERAL FOR COOPERATIVES AND INDUSTRIAL ESTATES

By

**J. M. GAJEWSKI**

Expert of

the United Nations Industrial Development Organization

Baghdad, May, 1982

Note: This report has not yet been cleared with the United Nations Industrial Development Organization, which does not therefore necessarily share the views expressed.

REPORT No.24

R E S T R I C T E D



# ASSISTANCE TO INDUSTRIAL ESTATES

TF/IRQ/79/OC1/UNIDO

Post:11-01/31.3.E

## PROJECT FINDINGS AND RECOMMENDATIONS

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# Abbreviations and Conversions

U.N.D.P. - United Nations Development Programme

U.N.I.D.O.- United Nations Industrial Development Organization

S.O.I.D. - State Organization for Industrial Development  
(Ministry of Industry, Government of Iraq)

D.G.C.I.E.- Directorate General for Cooperatives and Industrial Estates

HQs - Headquarters

N.I.E. - Nahrawan Industrial Estate

H.T. - High Tension

1 I.D. (Iraqi Dinar) = US \$ 3.37

## I. SUMMARY

1.1. This report is a complementary one to the author's Mission Terminal Report prepared in November, 1981, (one year assignment) and summarizes the work executed during the supplementary of his assignment, from 29 November, 1981 till 28 May, 1982. During the period the author continued his services and assistance to the State Organization for Industrial Development, Directorate General for Cooperatives and Industrial Estates, in achieving their tasks in implementation of Nahrawan Industrial Estate Project and development of further Industrial Estates in Iraq.

1.2. To avoid repetition of some basic information concerned the project, the author wishes to request the reader to refer for more details in the subject and for general information on the project, to the above mentioned Report No.15, prepared by him in November, 1981.

1.3. The principal tasks of the author during the supplementary six months period were related to advising and assisting the DGCIE in preparation of a long term proposal on development of industrial estates in Iraq and elaboration of some particular reports and papers concerning the implementation process of Nahrawan Industrial Estate.

1.4. During the mission the author in close cooperation with his senior counterparts from DGCIE has carried out studies and prepared reports or papers on the following particular subjects.

1.4.1. "A proposal on Industrial Estates Development in Iraq"- Paper No.14. The study was carried out since September 1981. In November, in view of revision of programme for industrial development in the private sector, made by the Government, the necessary adjustment was also introduced to the previous study and finally the Paper No.14 has been completed and submitted in December 1981. A gist of the Paper forms appendix to this Report.



1.4.2. Project Progress Report, (No. 18) covering the half year period of project operation from June, 1981 to November, 1981.

1.4.3. Cost and Viability Analysis for some selected clay-brick factories in N.I.E. (Report No. 19). On the basis of some preliminary offers received from prospective suppliers of clay-brick manufacturing machinery, the author has arrived at the estimated figures on investment capital involved and factories operating costs. Suggestions on fixed selling prices of bricks were also given.

1.4.4. General Industries at Nahrawan Industrial Estate. (Report No. 21). A more detailed suggestions were presented in the report concerning types of industries to be accomodated in the estate.

1.4.5. Another short Paper is under preparation dealing with the establishment of a common clay-pit unit at N.I.E. Due to delay in arrival of Brickmaking Specialist the study would only be of tentative nature pending receipt of more basic technological data required to arrive at a realistic result.

1.5. Simultaneously, a current advisory services were provided to the DGCIE in tendering, selection of offers and other aspects in the estate construction process.

1.6. The author's activities also included revision of project document and project budget. In this respect a proposal for extension of the project was prepared in three alternatives on behalf of the DGCIE, for the benefit of a smooth project implementation. As DGCIE has presently decided not to extend the project operation, the author's work was limited only to making small adjustment in distribution of available funds with small additional contribution needed to cover existing obligations and fellowship program.

1.7. Additional recommendations for the consideration of DGCIE were also made and included in the report.

## II. INTRODUCTION

2.1. Project Background.

The Project Background information was given in the Mission Terminal Report (No. 15), prepared by the author in November, 1981.

2.2. Summary Outline of Official Arrangement.

The duration of the UNIDO Project was initially scheduled in the project document for two years period.

The author's appointment, as Industrial Economist and Chief Technical Adviser was for one year. Just before expiration of the one year assignment after presentation of his Mission Terminal Report the D.G.C.I.E. has requested to extend his mission for additional six months. The aim of this extension was to ensure continuation of further studies on industrial estates development in Iraq and provision services and assistance in the implementation of N.I.E. project, as indicated in the project document. Following the D.G.C.I.E. request UNIDO has agreed to extend the author's assignment until 29.5.82

A revised Work Plan for the author, covering the six months period has been prepared, approved by the D.G.C.I.E. and accepted by UNIDO. The Work Plan forms Appendix No. 1 to this Report.

At that time, D.G.C.I.E. has also pointed out that the author's services may be required beyond this time but a decision in the matter will be made during Project Budget Revision scheduled for March, 1982, because of involvement of additional funds to the project budget in relation of the Revision "A" already made in November, 1981.

2.3. Project Objectives.

The Project Objectives were listed and discussed in the Mission Terminal Report (for one year assignment). The particular objectives of the additional six months period were determined as follows:

2.3.1. To complete the already commenced study and make proposals on a long-term programme for development of Industrial Estates in Iraq.

2.3.2. To advise and assist the D.G.C.I.E. in preparation of viability analysis for common facility units at N.I.E.

2.3.3. To prepare economic calculations and propose rentals and fees for leasing industrial land at N.I.E.

2.3.4. To assist the D.G.C.I.E. in tendering and contracting of particular jobs related to the implementation process of Nahrawan Industrial Estate.

2.3.5. To formulate proposal on General Industries in N.I.E.

2.3.6. To establish viability of new and relocated clay-brick factories at N.I.E. and recommend incentives to encourage private capital investment in clay-brick industry.

2.3.7. To continue on-the-job training of counterparts in the above specified subjects.

2.3.8. To assist and advise the D.G.C.I.E. in preparation of the Revision "B" of the project budget and project document, if so desired.

In the context of the related Background and Plan of Work the activities performed, by the author, findings and recommendations made by him are described in this report.

## III. ACTIVITIES AND FINDINGS

### 3.1 Project activities:

The author's activities in the project during the additional six months extension of the assignment were related to the following:

#### 3.1.1 Field surveys:

The author jointly with Mr. P.P. Dharwadker and counterparts have visited an area of land near Garma west from Baghdad, suggested for location of an industrial estate. Another locations at Mahmoudia, Abu Ghraib and Jurf Al-Naddaf have also been proposed but the planned visits have been postponed. Similarly another two trips proposed by the author to the Northern and Southern parts of Iraq have temporarily been postponed by DGCIE.

#### 3.1.2 Studies:

On the basis of the Government Five Years Plan for development of industries in private sector and available general statistical data the author, jointly with his Senior Counterpart Mr. Ali M. Fukaiki had carried out a study and prepared proposals on future development of Industrial Estates in Iraq (Paper No.14)

A programme has been drafted for a period until 1990 with suggested priorities for carrying out feasibility studies for new estates in Baghdad, Diyala, Neinawa and Al-Basrah Governorates. Besides the industrial estates the DGCIE is advised to select in several Governorates suitable land areas to be reserved for industrial use. Suggestion on establishing of several service centres in Baghdad were also made for the decision of competent Authorities.

Another study has been carried out in respect of viability of various types of clay-brick factories to be established or relocated to N.I.E. (Report No.19). For more details please see the Gist No.19 Appendix No. 7 to this report.

Proposals on selection of general industries at N.I.E. were subject of a study and Paper No. 21 was prepared by the author in cooperation with senior counterpart listing several industries which may be subject of further feasibility studies.

### 3.1.3 Day-to-day Advisory Service:

Several current advisory services were provided by the author in technical and economical problems. His advice was transmitted during meetings held in the office with staff members, consultants and representatives of other State Organizations.

He also assisted other experts in the project during their studies and planning stages of individual parts of the industrial estate buildings and systems. The advice was given based on his past experience and knowledge gathered on similar projects.

### 3.1.4 Fellowships and Study Tours:

Within the project activities one of the most important part was the training programme laid down in the project document.

In October, 1980, two staff members completed a Fellowship Programme in Turkey, on planning and operation of industrial Estates.

In 1981, two Senior Government Officials of DGCIE have completed a Study Tour to Thailand and Pakistan to get themselves acquainted with the typical problems arising in construction and operation of industrial estates in the above countries.

In view of the importance of training the key-staff for management of N.I.E. and in agreement with DGCIE a further programme for three fellowships has been prepared and approved for implementation in 1982. Since the required financial allocation is now available in the readjusted project budget necessary action is awaited to make up some delay occurred in finalizing the arrangement for the fellowships.

On-the-job training was carried out through close collaboration with his counterparts during studies and preparation of reports and papers.

3.1.5 Project Administration:

Besides the professional work, the author was acting as Chief Technical Adviser of the project. He coordinated the preparation of the revised detailed work plans for each of the experts for 1982 and later on the execution of the work in such a way as to provide DGCIE with comprehensive studies, reports, drawings and tender documents in due time to enable them for a smooth project implementation.

The author closely co-operated on day-to-day basis with the UNDP Office and UNIDO HQs ensuring easy transmission of necessary information on project progress and in other direction keeping project team informed on new circulars, instructions and comments on project work received from the UNDP and UNIDO.

3.1.6 Field and office equipment:

During the reporting period the utilization of two project cars was affected due to shortage of drivers. The maintenance of the cars needs also further improvement.

The DGCIE has purchased a blue print machine suitable for making copies of large size drawings up to the size A0 (1188 x 840 cm.)

The existing photocopying equipment needs also permanent maintenance and repair.

Concerning other equipment, it is felt that the provision of a new typewriter (electric) would be desirable.

3.2 Findings deriving from author's activities

3.2.1 Industrial estates in Iraq:

It is now understood that the Government has accepted industrial estates development as a tool for faster growth of industries in private sector.

First priority is given to the Nahrawan Industrial Estate which as a pilot industrial estate might be considered as an example. Therefore, special attention should be paid to its construction. The implementation of the estate project is now in progress. It is also expected that the Government may soon take decision on execution of Housing Scheme which is vital for final success of the estate project.

The Nahrawan Industrial Estate requires, however various further economic and technical studies in respect of:

- Common clay winning
- Maintenance and repair workshop for clay-brick machines
- Rent and fees level for leasing industrial land at N.I.E.

amongst others.

Further feasibility studies on new industrial estates in Iraq have to be carried out as soon as the DCCIE will approve the proposals laid down in the Paper No.14. On its basis location of future estates could be preliminarily selected and reserved. After completion of the studies and their approval, land acquisition may start.

3.2.2 Implementation of Industrial Estate Project at Nahrawan

1. Approach road:

The total length of the approach road will be km.29.826. The detailed designing of first part of the road from km.9.000 to km.29.826 has been completed and construction of this part is expected to start soon. The remaining portion from joining point with existing main road in New Baghdad to km.9.000 is under designing.

2. Electric High Tension Line:

The High Tension electric line will generally follow the route of the approach road. Detail design has been completed and contract for construction signed with a foreign contractor. Steel towers have been prepared and are now in shipping to Iraq. Foundation work just started.

3. Water Supply Scheme:

The detailed designing has been accomplished by a consulting company. The final design after verification will be approved and a tender for execution of the work will be announced approximately in April, 1982.

4. Housing Scheme:

Within the project activities a tender document for consultancy services on Housing Scheme has been prepared and is pending announcing a tender by DGCIE. The funds required have not yet been allotted.

5. Telecommunication System:

Designing of the telecommunication system has been completed. The DGCIE may now approve the proposal submitted by State Organization for Telecommunication and allot required funds.

6. Leasing of Industrial Land:

The competent Government Authorities have recently authorized the DGCIE for owning, distributing and leasing the industrial land at N.I.E. to private entrepreneurs.

7. Response from Industrialists:

On 23rd of January, 1982 the DGCIE held a meeting with several prospective industrialists in clay-brick industry, who are expected to establish new or relocate their existing factories to Nahrawan Industrial Estate. Among 45 invited individuals selected from a list of existing clay-brick factories the meeting was attended by representatives of 21 entrepreneurs. The audience was briefed on the estate project and various facilities offered to



industrialists in the estate. Conditions on leasing the industrial land in the estate, incentives for investors, rentals and fees were also explained.

During the meeting, participants have raised among others, the two following points:

1. Organization and operation of the common clay-pit:
2. Government subsidies for relocated clay-brick factories.

Re: 1 - It seems necessary to prepare now a more detailed scheme of the clay-pit organization and lay down such an operating system which would ensure confidence of the factories' owners, in the timely supply of clay and include provision for necessary safeguard. The common clay-pit may be run by a cooperative. Owners of clay-brick factories would be members of such a cooperative and would have influence on a proper operation of the enterprise. Alternatively, the common clay-pit may also be run by a private company operating it on a commercial basis, with proper assurances.

Re: 2 - As regards the subsidies for relocated factories, these were always recommended to DGCIE by UNIDO experts. Without compensation of the estimated losses, due to shifting the existing clay-brick factories to Nahrawan, it would be difficult to convince owners to relocate their factories with necessary modernization of the production processes, which would need additional capital investment.

3.2.3. Programme of Industrial Estates Development in Iraq.

The programme for industrial estates development in Iraq was included in the Paper No. 14, prepared jointly by the author and Mr. Ali M. Fukaiki, his Senior Counterpart, in December, 1981. DGCIE is now studying the proposal and their comments and approval are expected soon.

Implementation of the programme will require carrying out preliminary and feasibility studies for particular industrial estates, namely:

- Garma Industrial Estate near to Baghdad, but located in Anbar Governorate;
- Industrial Estate in Diyala Governorate;
- Industrial Estate in Neimawa Governorate;
- Industrial Estate in Al-Basrah Governorate.

The studies may be carried out in 1982, 1983 and 1984 as suggested in the Paper No. 14. After completion of the preliminary studies the D.G.C.I.E. may start land acquisition for approved alternative location of the estate.

3.2.4. Requirement for further expertise.

The implementation of the project of first industrial estate in Iraq, the Nahrwan Industrial Estate, from some reasons perhaps beyond D.G.C.I.E. control, is delayed. It is advised that at least the full investment process on the establishment of the first estate should be completed by D.G.C.I.E. with the help of UNIDO experts as it is obvious that there exists an absolute need for further technical assistance for the successful completion of the first venture of this type. The author's suggestions in the matter were submitted to D.G.C.I.E. in form of a draft budget revision, in three alternatives - (See Appendix No. 3 to this report). The response of D.G.C.I.E. was limited to introducing only minor adjustment in the budget. Copy of the final draft budget revision "B" forms Appendix No. 4 to this report.

## IV. RECOMMENDATIONS

Some of the recommendations given in the mission terminal report No. 15, have been implemented, the remaining are pending the DGCIE decision and action.

In addition, the author, as a result of his half year extended mission, wishes to submit for consideration by DGCIE, the following recommendations:

1. Special attention should be paid to advance nomination of the project manager of N.I.E. and selection of key staff for managing the Estate. The project manager could be requested to work out with assistance of UNIDO experts the organizational structure for the operation phase of the Estate, including circulation of various documents within the Estate administration, their proformas etc.
2. The DGCIE may arrange further direct contacts with owners of the existing clay-brick factories which are to be relocated and with prospective entrepreneurs in clay-brick industry and other general types industries. The DGCIE may enter into close cooperation with other State Organizations, or Government Authorities dealing with distribution of industrial land, to find out and select applicants for leasing industrial land at N.I.E. A list of factories envisaged for relocation should be made available to DGCIE, as soon as possible.
3. The DGCIE may apply to the competent authorities for granting liberal compensation to owners of clay-brick factories which will be relocated to N.I.E.

4. A joint action of the Department of Cooperative and the Department of Industrial Estates at DGCIE, seems necessary in organizing and advertising for the establishment of a common clay pit which could be run as a cooperatives of clay-brick factories' owners.

5. The recently enhanced prices by the Government for clay bricks should be applicable to private manufacturers, too. The prices should differ only for classes of bricks as per obligatory Iraqi standards. Adequate quality control may be introduced to establish the classes of production of a particular factory.

6. It is advised that DGCIE staff, jointly with UNIDO experts should complete at least one investment process on the establishment of an industrial estate, including planning, contracting, construction and putting into operation. This may enable the managerial staff to get fully acquainted with various problems arising during the implementation of the project and thus facilitate execution of future projects with the least external help.

Because of certain constraints beyond <sup>the</sup> control of the DGCIE, the execution period of works at N.I.E. is expected to spill over the scheduled time, the UNIDO expertise should continue in the interest of successful completion of the project.

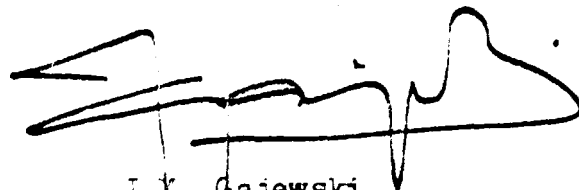
7. The D.G.C.I.E. should take further necessary action in respect of the establishment of housing at Nahrawan Industrial Estate. In view of scarcity of labour force, the lack of housing facilities at N.I.E. may adversely affect the success of the estate project as a whole.

## Acknowledgement

On completion of his half year extension assignment, the author wishes to repeat his sincere thanks to Dr. Abdulwahab H. Al-Najjar, Director General, (D.G.C.I.E.), Mr. Yassin Al-Rubaei, Chief Engineer, Mr. Ali M. Fukaiki, Economist and their associates for cooperation and help which facilitated the author's work in the project.

Likewise his thanks and appreciation are due to the Resident Representative of the U.N.D.P. Mr. A.A.K. Soghaier, the U.N.I.D.O. Headquarters and associated staff for their assistance in solving various problems arising during the project implementation.

The author also wishes to place on record good cooperation and support in the project work he got from Mr. P.P. Dharwadker, U.N.I.D.O. expert.



J.K. Gajewski

**APPENDICES**

Project No. TF/IRQ/79/001

Post No. 11-01/31.3.E

S. No	Description of Activities	1981 DEC
1-8	Included in the initial Work Plan	
9	Viability analysis on common facility units at N.I.E.	
10	Detailed calculation of rent and fees for N.I.E.	
11	Assistance to IIC/IE in tendering and contracting	
12	Market study on country demand for industrial plots and land	
13	Overall country prospects of industrial estate development	
14	Training of country experts	
15	Revision of the project document and/or project budget	
16	Project progress and Terminal Reports	
17	Proposal for General Industries in N.I.E.	
18	Cost and viability analysis for clay brick factories (phase II)	
	<u>Remarks</u>	
	*) Subject availability of basic data	
	**) The activity is expected to spill over	
	***) Feasibility studies are required	

SUPPLEMENTARY WORK PLAN

for the period  
from 29.11.1981 till 28.5.1982

	1	9	8	2	
JAN	FEB	MAR	APR	MAY	Remarks
					*) , **)
					*) , **)
					***)
					***)
					***)

Planned annual leave



TERMS OF REFERENCE  
(As per Work Plans)

Vis-a-vis related project activities.

S. No.	Terms of Reference	Related activities, Reports and Papers prepared by the author and his counterparts during the assignment.
1	2	3
1 to 8	(Included in the One Year Mission Terminal Report No. 15)	
9	Viability analysis on common facility units at N.I.E.	Preliminary cost calculation of common clay-pit operation was included in the Feasibility Study Report (No.2). In absence of Brickmaking Specialist who was expected to work out technological data, the author has prepared a revised tentative cost analysis (Paper No. 23). Viability analysis on Laboratory and repair workshop will be carried out after preparation of technological parts of the same, by Brickmaking Specialist.
10	Detailed calculation of rent and fees, etc. for N.I.E.	This can be prepared only after arriving to actual capital investment figures to be obtained from contractors.
11	Assistance to D.G.C. I.E. in tendering and contracting.	Assistance in analysing offers for consultancy services on common facility and service units has been jointly provided by the author and Mr. P. P. Dhalwadker. Details were included in several Memoranda (See project files.)

Cont.....

1	2	3
12	Market study on country demand for industrial developed land	A study was carried out in this respect by the author in close cooperation with DGCIÉ counterparts. Results of the study are included in the Report No.14.
13	Overall country proposals on Industrial Estates Development Plan.	The proposals resulting from the above mentioned item 1 were also included in the Report No.14.
14	Training of counterparts a) fellowship b) on-job training	A programme for 3 fellowships has been arranged and will be implemented during 1982  The studies, were jointly carried out and reports and papers prepared by the author and his counterparts.
15	Revision of the project budget and/or project document.	Revision "A" of the project budget was made by D.G.C.I.E. with assistance of the author, in November, 1981. The budget was rearranged by shifting the sum of \$ 18,000 from "International Experts" item to Fellowships. Draft Revision "B" was submitted by the author on 1 <sup>st</sup> of March, 1982, as desired, to D.G.C.I.E., in three alternatives (See Appendix No. 3). The D.G.C.I.E. has decided now not to allocate additional funds for expertise. The approved final Revision Forms Appendix No. 4.

.... cont.

1	2	3
16	Project progress and terminal reports	The second six months project progress report has been prepared by the author in collaboration with Mr. P.P.Dharwadkar, in December, 1981 (Report No. 18). This report (No. 24) is a supplementary mission terminal report of the author.
17	Proposal for General Industries in N.I.E.	The subject was discussed and recommendations made by the author in Paper No. 21, prepared in February, 1982.
18	Cost and Viability Analysis for clay-brick factories at N.I.E. (Phase II).	Because of absence of Brickmaking Specialist the author has carried out only a preliminary study. The conclusions and recommendations are included in the Report No. 19, prepared in February, 1982.

U.N.I.D.O. Project No. TF/IRQ/79/001

PROPOSED ALTERNATIVES OF ASSIGNMENT PERIODS  
FOR EXPERTS, SUPPORT PERSONNEL AND FELLOWSHIPS

S. No.	Description	1980	1981	1982	1983	1984	Estimated Costs
	Nahrawan Industrial Estate - Project implementation period	[Solid bar from 1980 to 1984]					I.D. 43,773,000
	<u>Alternative 1</u>						-
1.1	Industrial Economist C.T.A.	[Solid bar from 1980 to 1982]					I.D. 240,041
1.2	Brick-making Specialist	[Solid bar from 1980 to 1981]					paid 151,020
1.3	Civil Engineer/Architect	[Solid bar from 1980 to 1981]					rqrd. 89,021
1.4	Project Secretary	[Solid bar from 1980 to 1981]					
1.5	Fellowships	[Solid bar from 1980 to 1981]					
	<u>Alternative 2</u>						-
2.1	Industrial Economist C.T.A.	[Solid bar from 1980 to 1982]					I.D. 214,819
2.2	Brick-making Specialist	[Solid bar from 1980 to 1981]					paid 151,020
2.3	Civil Engineer/Architect	[Solid bar from 1980 to 1981]					rqrd. 63,799
2.4	Project Secretary	[Solid bar from 1980 to 1981]					
2.5	Fellowships	[Solid bar from 1980 to 1981]					
	<u>Alternative 3</u>						-
3.1	Industrial Economist C.T.A.	[Solid bar from 1980 to 1982]					I.D. 188,112
3.2	Brick-making Specialist	[Solid bar from 1980 to 1981]					paid 151,020
3.3	Civil Engineer/Architect	[Solid bar from 1980 to 1981]					rqrd. 37,092
3.4	Project Secretary	[Solid bar from 1980 to 1981]					
3.5	Fellowships	[Solid bar from 1980 to 1981]					
	<b>Legend:</b>						
	[Solid bar]	- included in the initial budget					
	[Dotted bar]	- additional budget is required					
	rqrd.	= additional fund required					

Baghdad, 1 March, 1982

Country: : IRAQ  
 Project Number : TF/IRQ/79/001  
 Project Title : Assistance to Industrial Estates

REVISION "B"  
 =====  
 (Basic data)

No.	I T E M	TOTAL	1980	1981	1982	1983
		man/months	m/m	m/19	m/m	m/m
	<u>Experts</u>					
11-01	Industrial Economist CTA	18	1	12	5	-
11-02	Brickmaking Specialist	15.7	1.1	2.6	8	4
11-03	Civil Engineer/Architect	24	1.2	12	10.8	-
11-04	Consultant	3	-	-	3	-
	Sub-total	60.7	3.3	26.6	26.8	4
13	Project Secretary	-		9.3	12	4
31	Fellowships		US\$ 2,692	-	US\$ 18,000	US\$ 22,000
32	Study Tours		-	US\$ 7,976	-	-

(As proposed by D.G.C.I.E.)

13 April, 1982

**G I S T**

of the Paper No.14 under title: "A Proposal on Development of Industrial Estates in Iraq".

As per Work Plan, the Paper has jointly been prepared by Mr. J.M. Gajewski, UNIDO expert and Mr. Ali M. Fukaiki, Director of Department of Studies, DGCIE, his senior counterpart.

In the Paper, on the basis of the Five Years Government Plan for Development of industries in private sector, the authors have made estimates on industrial developed land demand in Iraq and suggested to DGCIE a programme for development of industrial estates in the country.

The proposal embraces the establishment of industrial estates in Baghdad, Neinawa, Al-Basrah and Diyala Governorates. Areas of land for each estate, number and sizes of plots of land have also been tentatively proposed.

The authors have recommended incentives for prospective entrepreneurs and suggested rearrangement in the present long procedure on land acquisition so as to shorten and simplify the process.

The Paper may be considered as an opportunity study and DGCIE can decide to carry out detailed Feasibility Studies for each particular estate, if so desired. Time schedule for the action has also been laid down.

Completed in December 1981

Number of pages 76

G I S T

of the Progress Report (Report No.18) for the period from June 1981 to November, 1981.

The report has been prepared in accordance with the Project Agreement and UNIDO rules, by the author acting as Chief Technical Adviser with assistance of Mr. P.P. Dharwadkar, the expert.

The report summarizes progress of the project made during the second half year of operation and underlines the achieved milestones in its implementation. These are:

- Preparation of various required studies.
- Completion of land survey and demarkation of land plot at N.I.E
- Awarding contract for consultancy services on Water Supply Scheme at N.I.E.
- Obtaining clearance for route of the road from the competent authorities and preparing the specifications (through State Organization for Roads and Bridges).
- Commencing the execution work on H.T. electric line, to N.I.E. (through State Organization for Electricity - Major Projects).

The report also points out fields matters for which necessary decisions from the Government side are expected as for example, setting up conditions and awarding sanctions to DGCIE for leasing of industrial land.

Prepared in December, 1981

Number of pages 13.

G I S T  
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of the Report No.19 entitled:"Cost and Viability Analysis for Clay-brick Factories at Nahrawan Industrial Estate".

The report deals with tentative calculations of capital investment and operating costs for seven types of clay-brick factories likely to be accommodated at N.I.E.

On the basis of available preliminary offers received by DGCIE from potential suppliers, the author has arrived to a comparative figures showing capital investment required and operating costs.

From economic point of view he recommends to establish clay-brick factories of at least 15 Million bricks/year capacity. However, at the present fixed prices level for clay-bricks even the 15 Million bricks/year factories appears to be ineffective and not viable.

The clay-brick prices, which should be established for each standard class of bricks, have to be revised and rearranged so as to ensure viability of the factories and create an encouraging climate for investment in clay-brick industry by private sector of the country's economy. Clay-brick factories of higher capacities, such as 30 or 60 Million bricks/year show better efficiency and viability but these are not applicable to the private sector due to very high invest capital which according to obligatory rules is not permitted for individual entrepreneurs.

After obtaining final offers, from suppliers, further studies in this respect seems unavoidable.

Prepared in February, 1982

Number of pages 65.



G I S E

of the Paper No.21, entitled: "General Industries at Nahrawan Industrial Estate".

Following a tentative proposal included in the Feasibility Study Report on Nahrawan Industrial Estate the author suggests the Paper a preliminary list of general type industries which may be accommodated in the Estate.

Two alternative lay-out plans for general industrial area are drafted by the author for consideration of DGCIE. The alternative I comprises of 70 plots of land in the general industrial area of the Estate and 5 in clay-brick factories area, the alternative II offers 104 plots of land and 5 respectively.

The author recommends the DGCIE to announce leasing of land and readjust finally the division into land plots on the basis of response received from prospective entrepreneurs.

The Paper has been worked out in close cooperation with Mr. Yassin Al-Rubaei, Chief Engineer, Senior Counterpart.

Prepared in February, 1982

Number of pages 17.

Summary

of the Paper No. 25, entitled "Common Clay Winning Unit at Nahrawan Industrial Estate (Cost estimates)".

The Paper deals with the proposal on establishing of a Common Clay Winning Unit at Nahrawan Industrial Estate. The unit is proposed to be a cooperative of the clay-brick factories owners. A mass of clay required in the estate would ensure benefits in economy reflecting in a low price of clay. The clay being raw-material for brick factories could be delivered by the cooperative direct to the factory stock.

The Paper contains, however, only a tentative cost calculation because of non availability of technical specification, which has yet to be prepared by Brickmaking Specialist who will join the UNIDO Project team. His arrival scheduled for September, 1981, has been delayed from reasons being beyond control of the D.G.C.I.E.

The Paper has been prepared in cooperation with Mr. Yassin Al-Rubaen, Senior Counterpart.

The at present estimated cost of clay is about E.D. 0/500, including considerably high profit which will ensure repayment of the loan likely to be granted by the Government.

Prepared in April. 1982

Number of pages 20



