

INCEPTION REPORT

Project Title	: Traceca: Port Network Plan and Improvement Programme. Renovation of the Ferry Terminals of Baku and Krasnovodsk.		
Project Number	: TNREG 9403/P507		
Country	: Azerbaijan and Turkmenistan		
	Local operators	EC Consultant	
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Signatures	: _____	_____	_____

Date of report : 22 May, 1996

Reporting period : From start of project end March, 1996 to mid May 1996

Author of report : Carsten Sorensen, Resident Project Manager, RAMBOLL, Baku

EC M & E team	_____	_____	_____
	[name]	[signature]	[date]
EC Delegation	_____	_____	_____
	[name]	[signature]	[date]
TACIS Bureau [task manager]	_____	_____	_____
	[name]	[signature]	[date]

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1. PROJECT SYNOPSIS

Project Title	:	Traceca: Port Network Plan and Improvement Programme. Renovation of the Ferry Terminals of Baku and Krasnovodsk.
Project Number	:	TNREG 9403/P507
Country	:	Azerbaijan and Turkmenistan

- Project objectives :
- a) Overall objectives
 - to facilitate communication and trade between the countries of the Traceca corridor and neighbouring countries to the benefit of the growing economies of these countries.
 - to safeguard the sea link between Baku and Turkmenbashi and renew and modernise the ferry terminal facilities.
 - b) Specific project objectives
 - to determine the design parameters for the modernization and rehabilitation of the two ferry terminals
 - to prepare the design of the works
 - to evaluate the economical and financial viability and prepare a financing plan
 - to prepare tender documents for the works ready for international tendering
- Planned outputs :
- The output will be a design, implementation plan and financing plan for the renovation and modernisation of the two ferry terminals, documented through intermediate project reports and a set of tender documents for each terminal ready for international tendering.
- The following reports and documents will be produced:
- A report after the first phase, giving the design parameters, calculation methods to be used and boundary conditions of the design for each port.

- A set of design drawings and calculation notes for each port after the second phase.
- A report giving the financial analysis, made by the Port authorities and monitored by the Consultant, for each terminal, after the third phase.
- The complete tender dossier for each terminal after the fourth phase.

Project activities : The activities of the project are divided into four phases and comprise the tasks as described in the following:

Phase 1 - Definition of the design parameters

- 1.1 Sea levels, wind, waves, currents, sedimentation
- 1.2 Geotechnical and seismic conditions
- 1.3 Existing layout and structures
- 1.4 Ferry traffic forecast and ship types to be used
- 1.5 Navigation and berthing conditions
- 1.6 Port operations and terminal capacities during construction phase and after completion
- 1.7 Land access routes by road and rail including parking area and shunting yards
- 1.8 Auxiliary facilities and utilities (electricity, water, sewerage connections)
- 1.9 Standards and codes of practice to be used for design

Phase 2 - Design of ferry terminals

- 2.1 Possible modifications to port layout
- 2.2 Detailed arrangement of the new ferry terminals
- 2.3 Basic design of ferry terminal structures
- 2.4 Basic design of upgrading of coastal protection works and possible dredged channels
- 2.5 Design of rehabilitation, modifications and new works for land access roads and rail connections including parking/shunting facilities
- 2.6 Basic design of upgrading of auxiliary facilities and utilities (buildings, electricity, water, sewerage systems)
- 2.7 Investigation regarding availability and cost of local natural materials, local manpower, etc.
- 2.8 Assessment of current international price level for works in the area
- 2.9 Bill of quantities for the entire projects of Baku and Turkmenbashi and budget pricing

Phase 3 - Economic and financial evaluation

- 3.1 General overview of macroeconomic factors affecting the projects

- 3.2 Macroeconomic trade and transport conditions prevailing in Azerbaijan
- 3.3 Macroeconomic trade and transport conditions prevailing in Turkmenistan
- 3.4 Operational cost estimation for both of the terminals
- 3.5 Economic and financial viability assessment of the terminals
- 3.6 Debt servicing analysis for the most likely financing arrangements
- 3.7 Possible modifications to the design of the port

Phase 4 - Preparation of International tender documents

- 4.1 General plan for tendering procedure and documents
- 4.2 Conditions of contract
- 4.3 Technical specifications
- 4.4 Drawings and bills of quantities

Each phase shall be documented through the preparation of the under "Planned outputs" mentioned reports which shall be submitted for discussion and approval of the respective Ports Authorities and the concerned EC-Tacis/Traceca units.

- Project starting date : a) Date of Contract signature: 27 February 1996
- b) Date of actual start - date of arrival of team in Baku: 20 March 1996.
- Project duration : Project duration is 12 months from effective date of start.

2. Analysis of Project - Start Situation.

2. 1. Relevant project context.

Despite some disturbing and delaying factors in the start up phase of the project (see later in section 2.2.b), we have at present completed a substantial part of the data collection activities, subject of the first phase of the project. This data collection has consisted of a combination of meetings with various institutions and companies concerned with the project, identification and review of background material and inspection and examination of facilities in the respective ferry terminals. A complete review of meetings and inspections undertaken will be presented in the phase 1 report to be prepared early June 1996, but a summary list of institutions and persons met until now is annexed to this Inception Report. For information see Annex 1.

These initial meetings and investigations have allowed us to establish good working relationships with the various parties concerned with or having an influence on the project. Besides providing us with the necessary background information, this also will facilitate exchange of information and discussions of the project in the coming phases, all helping to secure a smooth and fast execution of the project.

Further the initial findings confirmed that the description of the project context presented in the Terms of Reference (TOR) is still valid with a few minor deviations/changes as outlined in the following:

- a) in contradiction to the situation described in the TOR, the water level of the Caspian Sea has been falling in the last year (an average of 10 cm lower in the end of 1995 than in the previous year).
- b) in addition to the two programmes mentioned in the TOR of general Technical Assistance for the ports of Baku and Turkmenbashi respectively, other projects under the Traceca programme have been launched, that may be of direct importance to the present terminal project, namely:
 - Technical Assistance to Port of Turkmenbashi (Master Plan Study), financed by EBRD, executed by Louis Berger.
 - Technical Assistance to Port of Baku (Organisation and Management Training), financed by Traceca, executed by HPTI.
 - Traceca Trade Facilitation / Legal and Regulatory Framework, financed by Traceca, executed by Scott Wilson Kirkpatrick.
 - Regional Traffic Forecasting Model, financed by Traceca, executed by W.S. Atkins.
 - Road Transport Services (Caucasus), financed by Traceca, executed by DHV Consult.

- Road Transport Services (Central Asia), financed by Traceca, executed by Sir Alexander Gibb & Partners.
- Railways Infrastructure Maintenance (Caucasus), financed by Traceca, executed by TEWET.
- Railways Infrastructure Maintenance (Central Asia), financed by Traceca, executed by DE-Consult.

A co-ordination with these other projects will also have to be done in order to arrive at solutions, that are in correspondence with each other and supporting the general objective of the Traceca programme in an optimum way.

The basic logistics for the execution of the project are also in place by now the consultant having established his own project office in Baku and representative/liaison office in Ashgabat. Both offices are in full operation with direct international communication facilities, etc.

2. 2. Main problems/deficiencies.

In the description of this item shall be distinguished between main problems/deficiencies that: - a) are concerned with the operation and use of two ferry terminals, and - b) are encountered by the Consultant team in the initial stage of the execution of the project.

a) Main problems/deficiencies facing the use of the terminals.

During the initial stage of the project, the inspection of the terminal facilities and review of operational procedures have identified/confirmed various aspects which are of major constraint the sufficient and safe use/operation of the ferry link. Among these the following major problems shall be mentioned:

- Marine works are worn down (fenders are in parts completely missing, structures are damaged and being damaged further at each ferry call),
- Decks of ramps are in a very bad shape. One ramp deck in Turkmenbashi is under renewal and others are almost not to pass by trucks (have not been designed for trucks in the beginning)
- Traffic operations and flow in the terminals are badly organised partly due to lack of proper facilities.
- No proper facilities for servicing the customers of the port: border crossing facilities, service facilities, waiting/reception facilities, etc.
- Congestion of access road to port, particularly in Baku.

- Access channel to Turkmenbashi suffer from the lack of proper maintenance; navigational lights and markings are missing, displaced or out of order. Channel needs dredging.
- Link spans (ramps) to vessels are reaching the utmost upper position.

This list of major deficiencies confirms fully the urgent need for the present rehabilitation project. Analysing the various deficiencies four major reasons single out as explanatory of the present situation:

1. rising level of the Caspian sea
2. lack of [proper maintenance
3. new situation of border crossing activities
4. change in the mode of traffic

b) Problems encountered by the Consultant.

Two major changes have been forced upon the planned organisational set-up by the Consultant for solving the present project. These changes are of varying importance to the execution of the project. Also the opening of the new railway between Turkmenbashi and Iran have had a minor impact on the timing of the Consultant's work.

1. Withdrawal of Aqua Techno, Italy from consortium

The decision of the consultant company Aqua Techno not to participate in the execution of this project has not had any measurable effect as the company RAMBOLL has been able to substitute the original project staff with adequate and likewise competent experts and in due time.

Written communication between EC and the Consultant in this connection is presented in Annex 2.

2. Non participation of Kasmorniiproekt, Azerbaijan in consortium.

At the time of bidding it was anticipated that the local design institute Kasmorniiproekt should have played a major role throughout the whole execution of this project both by providing staff for the preparation of the design, by providing the necessary background information on local tradition and standards of construction, and not least by making available the complete files of information on existing terminal facilities and on the earlier proposed renovation projects.

Likewise the knowledge of local practices of project approvals and the local contacts of Kasmorniiproekt would have facilitated the work of the consultant in an important way. The original confirmation of Kasmorniiproekt's intention to work in association with the Consultant on this job was clearly stated in letter of association from Kasmorniiproekt of date November 1995 (see attached copy, Annex 3).

The final arrangements for the participation of Kasmorniiproekt in the project group has been subject of discussions between the two parties since the arrival of the management team in Baku by the end of March 1996 and has finally been concluded only a few days ago before the arrival of the Tacis M&E to Baku, unfortunately with a negative result. The official letters exchanged in this connection are attached in Annex 3.

Basically the outcome of the discussions were:

- that to carry out the complete design entirely by Kasmorniiproekt, they were asking USD 500,000 which by far exceeds the amount set aside for this purpose in our contract with EC, and on the other side:
- that Kasmorniiproekt was not prepared to participate in a more limited way e.g. by providing the services of only a few experts to the project group/consortium.

The reason why it has taken so long to arrive at this final decision shall be explained by the fact that we have considered it of high importance to the solution of the project that Kasmorniiproekt was participating both:

- because they have made the prior designs,
- the status of Kasmorniiproekt as an earlier well recognised design institution with many local contacts and with detailed knowledge of all local aspects of the project and finally, but not least
- because of the statement of their key position as indicated by the EC by their mentioning in the TOR.

The discussions with Kasmorniiproekt and their final decision have had negative implication on the execution of the project (seen from the Consultants side) in three different ways; - with respect to planning and initial execution, - with respect to access to background documentation and - with respect to costs of consulting services

- the discussions have taken much of the resident project management's time and have delayed the initiation of the data collection and inspection because the consultant initially was waiting for the participation of also Kasmorniiproekt staff in these activities
- the consultant have used more time on the data collection itself than would have been the case with the participation of Kasmorniiproekt and the direct access to their files

- the consultant is presently facing a situation where he is using additional time for finding replacement for Kasmorniiproekt staff which is further delaying the activities of the consultant
- the idea of setting up local project office at the Kasmorniiproekt institute has had to be forgotten and the very time consuming activities of identifying and setting up new local project office facilities in Baku entirely from scratch have been undertaken and completed
- the absence of Kasmorniiproekt is critical in the cases where documents that can not be found elsewhere are necessary for the execution of the project, e.g. geotechnical reports. Therefore it must be ensured by the client that access to Kasmorniiproekt files is available for the consultant. It is an obligation according to TOR
- finally the absence of Kasmorniiproekt will mean additional costs to the consultant to the extent that the work of Kasmorniiproekt will have to be carried out by expatriates staff members

3. Opening of a new railway line Turkmenistan-Iran.

Due to the co-ordination with the master plan project for the port of Turkmenbashi, the economic expert of the consultant team had planned to participate in a seminar in Ashgabat in week No. 22 together with the representative of the consultant on the master plan project, to discuss mutual aspects of trade and traffic and forecast for the port. Unfortunately, this seminar was re-scheduled because of the opening of the new railway line and was planned for the last week of May. As the result hereof will have to be used in the Phase 1 Report, this report can only follow hereafter (say mid of June).

2. 3. Situation of local operator.

The local operators of the two ferry terminals are the respective port authorities of Baku and Turkmenbashi.

The administrations of both ports are presently receiving technical assistance from abroad which eventually will result in a reorganisation of their administration in a more cost efficient and commercial oriented direction.

This will also be to the benefit of the ferry terminals and their operations. The marine operation and the sea link between the two terminals are carried out entirely by the Caspian Shipping Co. that is an Azerbaijan-based company.

2. 4. Target group.

Being the owners of the terminals, the port authorities of the two ports will be the immediate beneficiaries of the project, once the terminals have been renovated.

In the next line as beneficiaries, the users of the sea-link is a direct target group of the project, among them being:

- Caspian Shipping Co.
- the forwarders and transport companies
- the railway companies
- the travellers and passengers

More distant but not least important target groups are those groups who will benefit only indirectly from improved ferry terminals facilities through increase in trade and traffic, among others being:

- trading companies and exporters/importers/major industrial companies
- employees in transport companies
- employees in services in port

Generally improved transport facilities should mean more reliable and less expensive supplies of consumer and industrial products to the benefit also of the economy of the countries/regions concerned as a whole. This is very much in line with the objectives of the project as said out in the TOR.

2. 5. Commitments.

No written commitments have at present been established between the consultant and other parties concerned with the execution of this project, except among the companies forming the consultants team (consortium).

Nevertheless excellent working relations have been established with all parties with whom the consultant had met during the initial data collection phase. Reference is made to annex 1. In particular the co-operation with the representatives of the two ports authorities under the heading of the respective Port Directors shall be mentioned as their full co-operation have been extended to the consultant in a positive and open manner, which has proven to be very useful during the initiation of the project and also will be very important in the continuation of the project.

The role of the Port Authority of Baku in this context is presently under discussion as the port administration has proposed a deeper involvement on their side because of the new situation with Kaspimorniiproekt not participating in the project. There are both advantages and disadvantages of this proposal and a possible deeper involvement of

the port, changing/having impact on the role of the port with respect to administrative context, should be discussed and approved by the EC-Tacis/Traceca administration.

3. Project Planning

The initial investigations on site concerning the present project of renovation and rehabilitation of the two ferry terminals in Baku and Turkmenbashi respectively, have confirmed that the original proposal, as being part of the contract, in general describes a work programme and overall planning, that is well suited for executing this project.

The original project planning is therefore proposed to be followed also throughout the following phases of the project, except for the deviations which have become necessary following the change in the original staffing schedule, particularly with respect to organisation of the execution. These deviations are described in connection with the explanatory notes in the following.

3.1. Relation/co-ordination with other projects

The particularity of the present project, in this connection, is that it is part of the Tacis/Traceca-Programme consisting of a series of projects that are executed more or less simultaneously and are linked together, not only with respect to overall administration, but also by having the same overall goal of facilitation of the trade and traffic on the corridor. Further the projects to varying extent have common problem areas.

Beside the Traceca-programme projects, also other development projects being carried out at present will have to be considered.

For the present Port Network Plan - Ferry Terminal Renovation Project the following other projects have been / will be approached for exchange of information on common areas of interest:

- Technical Assistance to Port of Turkmenbashi (Master Plan Study), financed by EBRD, executed by Louis Berger.
- common areas: traffic forecasts, port layout etc.
- Technical Assistance to Port of Baku (Organisation and Management Training), financed by Traceca, executed by HPTI.
- common areas: port layout, organisation and operations, sharing of activities and services, traffic forecasts.
- Traceca Trade Facilitation / Legal and Regulatory Framework, financed by Traceca, executed by Scott Wilson Kirkpatrick.
- common areas: legal setup and cross border services in terminal.
- Regional Traffic Forecasting Model, financed by Traceca, executed by W.S. Atkins.
- common areas: traffic forecasts.
- Road Transport Services (Caucasus), financed by Traceca, executed by DHV Consult.
- common areas: layout of road site service points (sharing of facilities)

- Road Transport Services (Central Asia), financed by Traceca, executed by Sir Alexander Gibb & Partners.
- common areas: layout of road site service points (sharing of facilities)
- Railways Infrastructure Maintenance (Caucasus), financed by Traceca, executed by TEWET.
- Railways Infrastructure Maintenance (Central Asia), financed by Traceca, executed by DE-Consult.

This list of projects is certainly more extensive than what might have been anticipated at signature of contract, as only the first two projects on the list were mentioned in the TOR.

Besides the co-ordination with other projects, the present project will be executed in close co-operation with the respective port administrations, the Tacis/Traceca bodies and other organisations and authorities concerned, in order to prepare a project that comply with the needs and requirements of the owners and users.

3.2. Project goals or objectives

The objectives of the project remain unchanged and are as described under chapter 1 - Project Synopsis:

a) Overall objectives

Broad terms

- to facilitate communication and trade between the countries of the Traceca corridor and neighbouring countries to the benefit of the growing economies of these countries.

Narrow terms

- to safeguard the sea link between Baku and Turkmenbashi and renew and modernise the ferry terminal facilities.

b) Specific project objectives

- to determine the design parameters for the modernization and rehabilitation of the two ferry terminals

- to prepare the design of the works

- to evaluate the economical and financial viability and prepare a financing plan

- to prepare tender documents for the works ready for international tendering

3.3. Project approach

As indicated in the introduction to this chapter, the original approach suggested, dividing the project into four phases consisting of the activities listed in the work methodology - Contract, Annex B.5 - is proposed to be maintained as presented in Annex 4 of the present Inception Report.

For the execution of the project, a project office in Baku, Azerbaijan has been established and a representation/liaison office in Ashgabat, Turkmenistan is also organised and operational.

The original plan of having the major part of the detailed design being carried out by local engineers will have to be changed, due to the fact that the envisaged co-operation with the local design institute, Kasporniiroekt, has turned out not to be possible - see chapter 2.2.

Alternatives are being investigated at present, but it remains a fact, that even if / when local engineers have been employed, it will not be possible to prepare detailed drawings etc. at an international acceptable quality using local technicians. Therefore, the employment of non-local technicians will have to be introduced in contradiction to what was foreseen at the signature of contract. Likewise a deeper involvement of non-local engineers with up-dated knowledge of modern design methods and techniques will have to be considered while still utilising local staff for traditional designs. A re-partition with non-local engineers doing mainly marine works design and local engineers doing mainly traditional buildings/landworks design is anticipated.

This shift in execution approach is lying behind the revised Staffing Schedule, see Annex 5, that is basis for the Form 1.4: Overall plan of operations, subject of section 3.5.

This shift in approach can be done without budget implications due to the fact that:

- local project manager will not be employed full time (RAMBOLL undertakes management of local engineers)
- remuneration of local engineers will be without overhead, as they will be employed individually
- participation of local engineers will be starting some time after initiation of the project, allowing a saving on local man-months in the initial stage of the project

*) [Following the meetings with the Tacis M&E, passing through Baku in week no. 21, RAMBOLL has been requested by Tacis M&E to participate in new negotiations with Kasporniiroekt and under the heading of a third party, Caspian Shipping Co., with the purpose of coming to an agreement allowing the involvement of Kasporniiroekt in the consortium of the consultant. RAMBOLL accepts to re-negotiate with Kasporniiroekt, while stating the implications and risks this may involve (further delay of initial phase).]

3.4. Intended results or outputs

Intended output remains unchanged and is as described under chapter 1 - Project Synopsis:

The output will be a design, implementation plan and financing plan for the renovation and modernisation of the two ferry terminals, documented through intermediate project reports and a set of tender documents for each terminal ready for international tendering.

The following reports and documents will be produced:

- A report after the first phase, giving the design parameters, calculation methods to be used and boundary conditions of the design for each port.
- A set of design drawings and calculation notes for each port after the second phase.
- A report giving the financial analysis, made by the Port authorities and monitored by the Consultant, for each terminal, after the third phase.
- The complete tender dossier for each terminal after the fourth phase.

All reports will be presented in both English and Russian.

Reference is also made to Form 1.5: Overall output performance plan annexed hereafter¹.

3.5. Planning of the whole duration of the project.

A planning comprising main project activities and corresponding time schedule is presented in Form 1.4, annexed hereafter.

This planning the remain the same as was envisaged at the time of signature of contract, so the very time consuming additional activities undertaken during the start up of the project, as described in chapter 2.2. are expected to be absorbed in the proposed general planning¹.

3.6. Constraints, risks and assumptions.

At first sight, the following basic constraints and assumptions for the proper execution of the project may be mentioned:

a) Constraints/difficulties:

- extremely many parties concerned with each project (EC Tacis, Tacis M&E, Tacis CU, Port Authority, Railway Authority, Road Authority, Hydrometeorological Authority, Shipping Company, other development projects (3-4), etc.

¹ The new negotiations with Kasporniioproekt requested by Tacis M&E may have delaying implications on the proposed planning, particularly with respect to submission of Phase 1 Report.

- the project comprises in reality two individual projects in separate countries (doubling the number of parties concerned as mentioned above)
- difficulty of communication between parties in different countries (5 countries)
- local engineering companies are not existing in traditional way
- the only local design institute with appropriate experience has decided not to participate in the project

b) Risks:

- that not all necessary and existing background documentation will be made available
- that possible local parties / counterparts will not apply to agreed / suggested planning and approvals in due time
- that requested new negotiations with Kasporniproekt will delay the project

c) Assumptions:

existing background information is made available in due time and free of charge (existing project, proposed project, information on natural conditions, etc.)

3.7. Planning for next reporting period

As no further progress reports are envisaged during the subsequent execution of the project, the planning outlined in section 3.5. has been made sufficiently detailed also to describe the details of each phase.

FORM 1.4: OVERALL PLAN OF OPERATIONS / PLAN OF OPERATION FOR THE NEXT PERIOD OF TIME

Project title : Port Network Plan and Improvement Programme. Project period : 01.04.1996 - 31.03.1997		Project number : TNREG 9403/P507		Country : Azerbaijan and Turkmenistan		Page :										
		Prepared on : 21.05.1996		EC Consultant : Consortium RAMBOLL												
Project objectives : Renovation and Modernization of the Ferry Terminals in Baku and Turkmenbashi.		TIME FRAME														
No	MAIN ACTIVITIES	INPUTS												EQUIPMENT AND MATERIAL	OTHER	
		1996						1997								
		4	5	6	7	8	9	10	11	12	1	2	3	EC Consultant	PERSONNEL	Counterpart
	1. Phase															
1.8-1.9	Initial meeting Acquisition & analysis of data Necessary surveys Joint meeting Report submission / approval	X	XXX	XXXX	XX	X	XXXX							10 months expatriates 6 months local	-	-
	2. Phase															
2.1	Outline layout				XXXX											
2.2	Detailed arrangement				XX											
2.3-2.6	Detailed design					XXXX										
2.7-2.8	Investigations, materials, prices					XXXX										
2.9	Bill of quantities & budget Joint meeting Report submission / approval							XX	XX					30.5 months expatriates 34.5 months local	-	-
	3. Phase															
3.1-3.3	Macroeconomic factors Economic and financial conditions							XX	XXXX							
3.4	Cost estimation								XX							
3.5-3.7	Viability, financing, modifications Joint meeting Report submission / approval							XXXX	XX	XXX	XX	X	X	4 months expatriates 6 months local	-	-
	4. Phase															
4.1	Tendering plan & procedures									XX						
4.2	Conditions										XX	XXXX				
4.3	Specifications										XXXX	XXXX	XX			
4.4	Drawings and bill of quantities Joint meeting Report submission / approval										XXXX	XXXX	XX			
													X			
													X			
		TOTAL														
														52.5 months expatriates 59 months local	-	

FORM 1.5 : OVERALL OUTPUT PERFORMANCE PLAN

Project title : Port Network Plan and Improvement Programme.	Project number : TNREG 9403/P507	Country : Azerbaijan and Turkmenistan	Page :
Planning period : 01.04.1996 - 31.03.1997	Prepared on : 21.05.1996	EC Consultant : Consortium RAMBOLL	
<p>Outputs (to be described and target dates indicated)</p> <ul style="list-style-type: none"> • A report after the first phase, giving the design parameters, calculation methods to be used and boundary conditions of the design for each port. <ul style="list-style-type: none"> - expected submission date, mid June 1996 (may be delayed due to requested negotiations with Kasporniiproekt) • A set of design drawings and calculation notes for each port after the second phase. <ul style="list-style-type: none"> - expected submission date, end November 1996 • A report giving the financial analysis, made by the Port authorities and monitored by the Consultant, for each terminal, after the third phase. <ul style="list-style-type: none"> - expected submission date, mid January 1997 • The complete tender dossier for each terminal after the fourth phase. <ul style="list-style-type: none"> - expected submission date, mid March 1997. 	<p style="text-align: center;">Agreed Objective Verifiable Indicators</p> <ul style="list-style-type: none"> • Receipt and approval of reports submitted. 	<p style="text-align: center;">Constrains and Assumptions C/A</p> <p><u>Constraints:</u></p> <ul style="list-style-type: none"> • Extremely many parties concerned with each project • The project comprises in reality two individual projects in separate countries • Difficulty in communication between parties in different countries • Local engineering companies not existing in traditional way • The only local design institute has decided not to participate in the project. <p><u>Assumptions:</u></p> <ul style="list-style-type: none"> • Existing background information is made available in due time and free of charge 	

Annex 1

List of Persons and Organisations Met During Data Collection

|Annex I - List of Persons and Organizations Met During Data Collection

Turkmenistan:

Cabinet of Ministers, Ashgabat	Mr. M.S. Yazberdiyev, Head of Transport Dept.
Tacis CU, Ashgabat	Mr. Jaap Sprey, Team Leader Mr. J. Stuart Ballard, Project Manager
Turkmenistan State Shipping Organization, Turkmenbashi (Port of Turkmenbashi)	Mr. K.D. Durdiev, Director Mr. Badamov, Chief Engineer Mr. Terekhov, Harbour Master Mr. Atayev Yazmurad, Ferry Terminal Director Mr. Tulegen Bekdjanov, Operations Manager
State Railways of Turkmenistan	Mr. K.K. Khalykov, Director Mr. Z. Bakhalov, Head of Cargo Traffic Dept. Ms. S. Kuzeleva, Deputy Head of Railway, Turkmenbashi
Ministry of Automobile Transport	Mr. S. Rakhmanov, Minister Mr. V. Elantsev, Dolphin Project Manager
Ministry of Use of Natural Resources and Environmental Protection	Dr. K.I. Atamuradov, Deputy Minister Mr. V.A. Glazovski, Head of Board for Env. Protect. Ms. L. Danilova, Head of Ecological Exploitation Mr. A.A. Starikov, Dpty. Head of Hydrometeorology
Turkmenbashi City Council	Mr. S.M. Ambartsumyan, City Architect

Azerbaijan:

Cabinet of Ministers, Baku	Mr. T.K. Mansurov, Head of Transport Dept.
Tacis CU, Baku	Mr. Kasimov, Director Mr. J. Efendiev, Deputy Director Mr. D. Charpentier, Team Leader Mr. Boris Smolin, Project Manager Mr. Kiazimov, Transport Expert
Tacis M&E, Caucasus	Mr. Hennie Maters
Baku International Harbour	Mr. A. Mamedov, General Director Mr. M. Mamedov, Manager of Execution of Works Mr. Sultan, Chief Engineer Mr. Azadov, Head of Hydromarine Structures Mr. Aliyev, Ferry Terminal Manager Ms. E.F. Lomova, Deputy Head of Economics Dept.
Ministry of Economy	Mr. I.M. Sadikhov, Head of Transport Department
Caspian Shipping Company	Mr. A.A. Bashirov, President Mr. F.G. Rasulov, GM of Operational Department Mr. M.M. Mirzoyev, Manager of Ferry Lines Section
Hydrometeorological Committee	Mr. Musayev, Director Mr. M. Mansimov, Deputy Director Mr. A. Aliyev, Head of Department for Caspian Sea

Railway Authority	Mr. M.S. Panahov, Deputy Chief of Railways Mr. R. Zeinalov, Head of International Links Mr. N. Nagyev, Chief of Operations Mr. V.I. Gorbachov, Chief Design Engineer
The World Bank	Mr. Faik Husseinov, Local Representative
HPTI/Uniconsult Consortium	Mr. Arit, Project Manager Mr. Lentsch, Assistant to the General Manager Mr. Pechmann, Assistant to the Operations Director Mr. Huebner, Assistant to the Financial Director
TEWET Consortium	Mr. Freitag, Senior Railway Expert Mr. Karl J. Adler, Railway Systems Engineer
Makro-Trans	Mr. Rovshan Housseinov, President
Militzer & Münch, Intl. Forwarders	Mr. Olaf Metzger, Managing Director
P&O Containers	Mr. Houshang Shahroudi
Bertling Caspian	Mr. Jeff Watkin, Operations Manager

Annex 2

**Communication EC/RAMBOLL Concerning Withdrawal of
AquaTechno**

FAX

RAMBØLL

RAMBØLL

Gøteborg Alle 12
8200 Århus N

Phone +45 89 44 77 00

Direct phone +45 89 44 77 30

Fax +45 89 44 76 25

Web: <http://www.ramboll.dk>

E-mail: hh@ramboll.dk

To The European Commission, Directorate General IA,
External Relations, 88, Rue d'Arlon, B-1040 Bruxelles
Fax No. 00 32 2 296 6012
Attn. Mr D. Stroobants

Date 1996-04-11

Initials HH/bwm

Job 963324

Ref.No. BB961058.HH


Number of
pages (incl. this)

Traceca: Port Network Plan and Improvement Programme
Renovation of the ferry terminals in Baku and Krasnovodsk
Proj. No. TNREG 9403/P 507
Service Contract No. WW. 94.07/04.01/B002. Modification of Project
Consortium, Revisions to Manning Schedule

- As agreed
- For your information
- Please comment
- Please phone
- For your approval
- For further action
- Also forwarded by mail

Attached please find letter of today regarding the above-mentioned subject as well as revised manning schedule and CV's of new team members.

Yours faithfully,
RAMBØLL


Hans Hartelius
Head of Department

The European Commission
Directorate General IA
External Relations
88, Rue d'Arlon
B-1040 Bruxelles

Att. Mr D. Stroobants

RAMBØLL
Gøteborg Alle 12
8200 Århus N

Phone +45 89 44 77 00
Direct phone +45 89 44 77 30
Fax +45 89 44 76 25
Web: <http://www.ramboll.dk>
E-mail: hh@ramboll.dk

**Traceca: Port Network Plan and Improvement Programme
Renovation of the ferry terminals in Baku and Krasnovodsk
Proj. No. TNREG 9403/P 507
Service Contract No. WW. 94.07/04.01/B002. Modification of Project
Consortium, Revisions to Manning Schedule**

Date 1996-04-11
Initials HH/bwm
Job 963324
Ref.No BB961055.HH

Reference is made to our telefax dated 1996-04-01 concerning the withdrawal of AcquaTecno (AT) from the project consortium.

In the following we outline our proposal to replace the staff members of AT with other staff members from the group, and we kindly ask for the acceptance from E.C. of the revised manning schedule. As stated in the above-mentioned telefax, the revisions entail no changes in our execution of the contractual methodology, in fulfilment of the requirements of the TOR issued by E.C., in the overall time schedule for the project, nor in the contractual budget.

The work assigned to AT comprises 10 manmonths divided between two engineers within the group: "Port/Marine Engineers" and some specialists on the "Resource Panel" for possible short-term intervention if decided by the project management during the course of the project development.

We propose to replace the staff members in the Port/Marine Engineer group by extending the work period of one of the other members of the same group, Lars Raunholt, and add work periods of 3 other experienced port engineers of RAMBØLL, carefully selected to provide the necessary expertise required within this group, see the attached revised manning schedule and annexed CV's.

As the field work has started in Baku from 20th March, through project activities carried out by the project director and the project manager/port planner, some additional knowledge of the project has already been obtained, which has assisted us in proposing the most relevant staff members for the parts of the project in question.

In addition to the general port design and marine works aspects to be covered by the above-mentioned Lars Raunholt (original member of the team) and by senior port engineer Jørgen Lisby, it is found that the ferry terminals for rail/truck access

present quite complex structural and operational problems and we have therefore proposed the intervention of an experienced chief consultant, mechanical engineer, Lars Nejstgaard, with thorough experience in design of ferry ramps, movable bridges, etc. as well as in the hydraulic or mechanical systems for operating such ramps.

With respect to the specific marine hydraulic aspects of the data collection and the definition of the design parameters, a specialized hydraulic engineer, PhD, Michael Høgedahl is proposed. As regards the hydraulic experts in the "Resource Panel", we plan to retain Professor Pavel Kaplin from the University of Moscow, and replace Mr A. Noli and Mr S. Pagani with Dr. J.C. Refsgaard from Danish Hydraulic Institute and Chief Engineer, Bjarne Mathiesen of RAMBØLL.

We hope that the mentioned modifications of the team, made necessary by the withdrawal of AT outside the control of RAMBØLL, meets with the acceptance of the E.C. and we assure you of our keen intention to carry out the project according to the TOR and to the full satisfaction of the E.C. and of the Recipient Authorities in Azerbaijan and Turkmenistan.

In order to comply with the overall time schedule for the project, we plan to mobilize Lars Raunholt and Jørgen Lisby in Azerbaijan on April 15, and we will therefore contact you on April 12 to enquire about the acceptance of the inclusion of J. Lisby as team member. Due to a slight delay in the start-up phase of the project, we plan to complete the Inception Report at May 10, 1996, in order to have a full view of the basis of the project before the completion of this report.

Yours faithfully,
RAMBØLL


Bjarne Mathiesen
Project Director

Encl.: Revised staffing schedule, dated 1996-04-11
CV's of new team members:

- Jørgen Lisby
- Lars Nejstgaard
- Michael Høgedal
- J.C. Refsgaard

FAX

RAMBØLL

RAMBØLL
Gøteborg Allé 12
DK-8200 Århus N

Phone +45 89 44 77 00
Direct phone +45 89 44 76 95
Fax +45 89 44 76 25
Web: <http://www.ramboll.dk>
E-mail: hle@ramboll.dk

To European Commission, DG1A, External Relations
88, Rue d'Arlon, B-1040 Bruxelles, Taxis IAC4
Fax No. 00 32 2 296 39 12
Attn. Mr D. Stroobants
Number of 2
pages (incl. this)

Date 1996-04-01
Initials HLE/bwm
Job 963324
Ref.No. B-960149.HLE

**TRACECA: WW. 94.07/04.01/B002:
Port Network Plan and Improvement Programme
Rehabilitation of the ferry terminals in Baku and Krasnovodsk**

Dear Mr D. Stroobants,

The above mentioned project is in the process of being started up by a consortium lead by RAMBØLL of Denmark. Other members of the consortium are:

- Booz Allen & Hamilton Ltd. - UK
- AcquaTecno - Italy
- Probel Consulting - Belgium

Supporting consulting organisations are:

- Danish Hydraulic Institute,
- Danish Maritime Institute,
- Danish State Railways Consulting, as well as:

- Kasporniiiproekt, Azerbaijan

- As agreed
- For your information
- Please comment
- Please phone
- For your approval
- For further action
- Also forwarded by mail

Affiliated to FIDIC
Company Reg.No. DK 46035

Due to certain circumstances one of the partners, AcquaTecno (AT), has informed us by fax of March 28th. 1996 that they have decided to withdraw from the consortium and not participate in the execution of the project. AcquaTecno covers 10 manmonths out of 37,5 expatriate manmonths (out of a total of 127,5 manmonths in the project).

The other consortium members have ascertained that the group without assistance from AT possesses the necessary expertise and resources to fulfil the contractual obligations towards the EC and complete the project in a fully professional manner, and we hereby undertake to do so.

We are now in the process of planning for alternative actions and we will return immediately after the Easter holidays. In order to prepare the optimum adjustments, we await the return of project director Mr Hans Hartelius from Baku with updated information. It shall be underlined that the proposed revisions shall entail no changes;

- In our execution of the contractual methodology,
- In fulfilment of the requirements of the TOR. issued by the EC,
- In the overall time schedule for the project,
- In the contractual budget.

Yours faithfully,
RAMBØLL

Henrik Larsen Egestad

Annex 3

**Letter of Association from Kasporniiproekt
Letters of Negotiation Kasporniiproekt/RAMBOLL**

ГОСУДАРСТВЕННЫЙ
ПРОЕКТНО-
ИЗЫСКАТЕЛЬСКИЙ
И НАУЧНО-
ИССЛЕДОВАТЕЛЬСКИЙ
ИНСТИТУТ
МОРСКОГО
ТРАНСПОРТА



СОЮЗМОРНИИПРОЕКТ

БАКИНСКИЙ

ФИЛИАЛ

КАСПМОРНИИПРОЕКТ

Баку-370065, 3-я Хребтовая, 117

тел. 38-84-31

2833-7000

№ N 02/56

„22 ноября 1995 г.“

На ваш № _____

„ “ _____ 198 г

PORT NETWORK PLAN AND IMPROVEMENT PROGRAMME,
RENOVATION OF FERRY TERMINALS OF BAKU AND KRASNOVODSK

I, Mr.F.Mustafaev, director of the KASPMORNIIPROJEKT institute agree to provide professional services of the institute for the activity of data collection and design in accordance with the Terms of Reference in the event that the project is awarded to the consultant RAMBOLL.

SIGNATURE

KASPMORNII-PROEKT
National Maritime Research Institute
370005 Baku
Azerbaijan

RAMBØLL
Gøteborg Allé 12
DK-8200 Århus N

Phone +45 89 44 77 00
Direct phone +45 89 44 77
32...
Fax +45 89 44 76 25
Web: <http://www.ramboll.dk>
E-mail: cs@ramboll.dk

**EU - Tacis/Traceca Project
Rehabilitation of Ferry Terminals in Baku and Turkmenbashi**

Dear Sir,

Further to our earlier information to you of the decision of the European Commission to award the contract for the above mentioned project to the consortium lead by RAMBOLL we are pleased to be able to confirm that this contract has been signed.

Date 1996-04-04
Initials EPE/epe
Job 963324
Ref.No BB960333.cs

Proposed as an important part of the consortium and in line with the letter of association by KASPMORNII-PROEKT to participate in this project as subcontractor to RAMBOLL we hereby have the pleasure of inviting KASPMORNII-PROEKT to prepare a proposal for their project activities. The proposal shall be prepared covering the project activities and programme as outlined in the work programme annexed to this letter.

The proposal will be used as basis of discussion for determination of the final work programme and payment of KASPMORNII-PROEKT to be included in the Agreement of Cooperation which shall be signed between the two parties.

Looking forward to a fruitful cooperation on this project to the benefit of both our companies, we remain,

Yours faithfully,
RAMBØLL

Hans Hartelius
Project Director

EU - Tacis / Traceca Programme.

Port Network Plan and Improvement Programme

Project No. TNREG 9403 - Contract No. WW.94.07/04.01/B002

Renovation of the Ferry Terminals of Baku and Turkmenbashi(Krasnovodsk)

Reference is made to the contract documents for the above mentioned project, awarded by EU to a group of EU - Consultants headed by RAMBOLL and supported by Kraspmorniiproekt. (ref. to attached Organization Diagramme, Work Programme and Staffing Schedule)

Main data from the contract documents:

Work Programme

Total duration of the project: 12 months, in the following numbered "month no. 1" (designated "M.1") to "month no. 12"(designated "M.12") with April 1996 as "M.1"

The programme is divided into Phases/Activities as follows: (note: Activities in several phases may have some overlap and therefore the total sum of lengths of the phases mentioned exceeds 12 months)

1. Phase (M.1 - M.3)

- Compile existing basic project data (M.1 - M.2)
- Summary of existing project data (russian/english) (M.3)
- Possible necessary additional surveys (M.3 - M.4)

2. Phase (M.3 - M.8)

- Planning, design, works/materials specifications and cost estimation of facilities

3. Phase (M.7 - M.9)

- Economic/Financial evaluation of projects

4. Phase (M.9 - M.12)

- Preparation of tender documents for international competitive bidding

Interventions of Kraspmorniiproekt: The main efforts will be carried out in phases 1 & 2 (as specified in the following), while the activities in phases 3 & 4 will mainly be review and commenting on documents prepared by other parties of the team.

Staffing Schedule

The total number of manmonths allocated to local consultants in the contractual staffing schedule shall be within a maximum of 70 manmonths. Interpreters will be working directly with the resident project management team.

Activities to be carried out by Kasporniiroekt

(Note: The mentioned activities have to cover both Baku and Turkmenbashi Ferry Terminals)

1. Phase

- Documentation of existing terminal lay-outs and structures (drawings, calculations, material/works specifications)
- Existing basic data on natural conditions; sea level variations, winds, waves, currents, seismic activity and intensity, etc.
- Geotechnical data available from previous investigations. Newest available topographic and bathymetric/sea bed surveys and sedimentation information
- Latest survey/inspection and state of maintenance reports for the terminal facilities
- Codes of practice, standards etc. used for the existing facilities and planned to be used for the new design

The information shall be compiled into an integrated report comprising a brief summary with drawings, calculations, survey reports and other supplementary documentation as annexes. Kasporniiroekt specialists, in cooperation with other specialists of the project group shall compile the Russian version of the report and the English version will be prepared according to arrangement by the project management.

2. Phase

- Assistance to modifications of general arrangement of ferry terminals following modification in road and rail access routes/marshalling areas
- Assistance to design and calculations for rehabilitation of marine structures and ferry ramps including passenger access facilities
- Planning and design of new terminal buildings; ticketing office, police and customs offices, passenger waiting room etc.
- Assistance to design of utilities systems; electrical, lighting, water supply and sewerage / disposal systems for the ferry terminals
- Assistance to determination of local price levels of works and materials

The activities shall be carried out in cooperation between local and international specialists of the project team. Project material shall be in the form of clearly drafted design drawings, calculations and works/materials specifications and descriptions in Russian language. The project management will arrange for the preparation of the final project material in the form of computerized drawings (Auto-cad system) in Russian and English as well as word-processed versions in Russian and English of the text documents

3. Phase and 4. Phase

Project documents in English and Russian covering the requirements of these phases will be prepared by the international specialists of the project team. The drawings shall be reviewed and commented on by the specialists of Kasporniiroekt before completion of the final versions

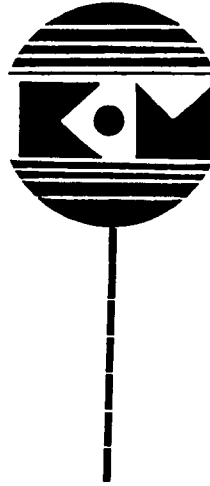
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ахтарыш
вә елми-
тәдгигат
институту

~~ИТТИФАТ ДӘНИЗ ЕТАЛА ИҺӘ~~

~~БАКЫ
ФИЛИАЛЫ~~

ХӘЗӘР ДӘНИЗ ЕТАЛА ИҺӘ

Бакы-370065, Б.Ағажев күчәси, 117
тел.: 38-84-31



Государственный
проектно-
изыскательский
и научно-
исследовательский
институт
морского
транспорта

~~СОЮЗМОРНИИПРОЕКТ~~

~~БАКИНСКИЙ
ФИЛИАЛ~~

КАСПМОРНИИПРОЕКТ

Бакы-370065, ул. Б.Агаева, 117
тел.: 38-84-31

628 1000

№ 01/25

« 3 »

март 1996 г.

На Ваш № _____

« »

_____ 19__ г.

Менеджеру фирмы "Рамболл"
господину К.Серенсену

Уважаемый сэр!

Государственный проектно-изыскательский и научно-исследовательский институт морского транспорта "Каспморниипроект" принимает предложения фирмы "Рамболл" об участии в совместной разработке проекта реконструкции паромных терминалов в Баку и Туркменбаши.

Сообщаем, что стоимость проектно-изыскательских работ по такому технически сложному объекту составит около 500,0 тыс. долларов США (без учета налога на добавленную стоимость в размере 20% от стоимости проектно-изыскательских работ). Объемы работ по проекту и сроки их выполнения могут быть уточнены.

Директор

Ф.А.Мустафаев

received 13.05.96
RAMBOLL, BAKU / CS.

TRANSLATION

To:
Mr. Sorensen
Project Manager of "Ramboll" Company.

May, 3rd, 1996.

Dear sir!

The state project research and scientific institute of sea traffic "Caspomorniiproject" accepts the proposal of "Ramboll" Company about participation in the joint design of renovation of the ferry-terminals of Baku and Krasnovodsk.

We inform you, that the cost of prolix and research works by such technical difficult object will be about 500,0 thousand USD (without including the tax on the additional value, which is about 20% from the cost of project and research works).

Project volumes of work and the duration of their carrying out are the objects of correcting.

Mustafaev
Director

KASPMORNII-PROEKT
National Maritime Research Institute
370005 Baku
Azerbaijan

Att.: Mustafaev P., Director

RAMBØLL
Gajybekov Str. 33/35, apt. 93
AZ-370010 Baku

Phone +994-12-933114
Priv. ph. +994-12-985743
Fax +994-12-933114
Web: <http://www.ramboll.dk>
E-mail: cs@ramboll.baku.az

EU - Tacis/Traceca Project
Rehabilitation of Ferry Terminals in Baku and Turkmenbashi

Dear Sir,

According to the decisions in our joint meeting with the ports administration of today in the Port of Baku, we hereby shall request you to prepare a proposal for providing the services of Kaspomorii-proekt for the above mentioned project as subcontractor to RAMBOLL as outlined in the work programme annexed to this letter.

Date 1996-05-06
Initials CS/
Job 963324
Ref.No baku001e.cs

An early reply is urgently needed as the project is under rapid development.

Yours faithfully,
RAMBØLL

Carsten Sorensen
Project Manager

EU - Tacis / Traceca Programme.

Port Network Plan and Improvement Programme

Project No. TNREG 9403 - Contract No. WW.94.07/04.01/B002

Renovation of the Ferry Terminals of Baku and Turkmenbashi(Krasnovodsk)

Reference is made to the contract documents for the above mentioned project, awarded by EU to a group of EU - Consultants headed by RAMBOLL and supported by Kraspmorniiproekt. (ref. to attached Organization Diagramme, Work Programme and Staffing Schedule)

Main data from the contract documents:

Work Programme

Total duration of the project: 12 months, in the following numbered "month no. 1" (designated "M.1") to "month no. 12"(designated "M.12") with April 1996 as "M.1"

The programme is divided into Phases/Activities as follows: (note: Activities in several phases may have some overlap and therefore the total sum of lengths of the phases mentioned exceeds 12 months)

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- Possible necessary additional surveys (M.3 - M.4)

2. Phase (M.3 - M.8)

- Planning, design, works/materials specifications and cost estimation of facilities

3. Phase (M.7 - M.9)

- Economic/Financial evaluation of projects

4. Phase (M.9 - M.12)

- Preparation of tender documents for international competitive bidding

Services to be provided by Kasporniiproekt

(Note: The mentioned activities have to cover both Baku and Turkmenbashi Ferry Terminals)

Kasporniiproekt shall assist in the execution of the above mentioned project phases and activities by providing the following engineers/experts:

Port/marine Engineer (PE),	experienced in design of ferry terminals
Structural Engineer (SE),	experienced in design of building works
Electrical Engineer (EE),	experienced in ports and building installations

Mechanical Engineer (ME), experienced in water supply and sewerage installations

Duration of services:

PE: 11 manmonths, full time, starting immediately

SE: 11 manmonths, full time, starting immediately

EE: 9 manmonths, full time, starting around 1. July 1996

ME: 9 manmonths, full time, starting around 1. July 1996

Working conditions:

Planning and initiation of the work of these experts will be the responsibility of the project management and the activities shall be carried out in cooperation between the local and the foreign specialists of the project team.

Kaspmornii-proekt shall provide normal office assistance and facilities for their specialists. It may be foreseen that the experts may have to work in the port of Baku from time to time in which case office facilities are made available by the Port.

Дәниз
нәглижаты
дөвләт
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ахтарыш
вә елми-
тәдгигат
институту

ИТТИФАГДӘНИЗЕТАЛАЛИНӘ

БАКЫ
ФИЛИАЛЫ

ХӘЗӘРДӘНИЗЕТАЛАЛИНӘ

Бакы-370065, Б.Ағажев күчәси, 117
тел.: 38-84-31



Государственный
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исследовательский
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морского
транспорта

СОЮЗМОРНИИПРОЕКТ

БАКИНСКИЙ
ФИЛИАЛ

КАСПМОРНИИПРОЕКТ

Баку-370065, ул. Б.Агаева, 117
тел.: 38-84-31

628. 1000

№ 01/29

« 8 »

МАЯ 1996 г.

На Ваш № _____

« _____ »

_____ 19__ г.

Руководителю проекта
фирмы "РАМБОЛЛ"
г-ну К.Серенсену

Уважаемый сэр!

На Ваше письмо от 06.05.96 г. сообщаю следующее:
Каспморниипроект является государственной проектной организацией и выполняет проектно-изыскательские работы для объектов морского транспорта по заданию юридических лиц на основе договорных отношений, разрабатывает комплексные проекты на строительство и реконструкции объектов, участвует в разработке отдельных разделов проектов по специализации института. В творческой работе института не практикуется выделение своих сотрудников для выполнения проектных работ в составе посторонних организаций, фирмы или групп.

Директор

Б.А. Мустафеев

received 13.05.96
RAMBOLL, BAKU/CS.

TRANSLATION

To:
Mr. Sorensen
Project Manager of "Ramboll" Company.

May, 8th, 1996.

Dear sir!

I reply to you letter (from 6/5/96) the following:

"Casporniiproject" is the state project organisation and makes the project and research works for the objects of sea traffic according to requirements of juridical persons and on the base of contracts.

It elaborates complex projects for building and reconstruction of objects, participates in elaboration of separate parts of projects over the speciality of the Institute.

It is not a practice in the work of institute to give its own workers for their work in the staff of outside organisations, companies or groups.

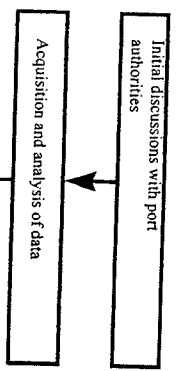
Mustafaev
Director.

Annex 4

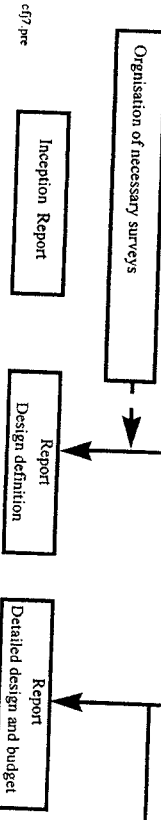
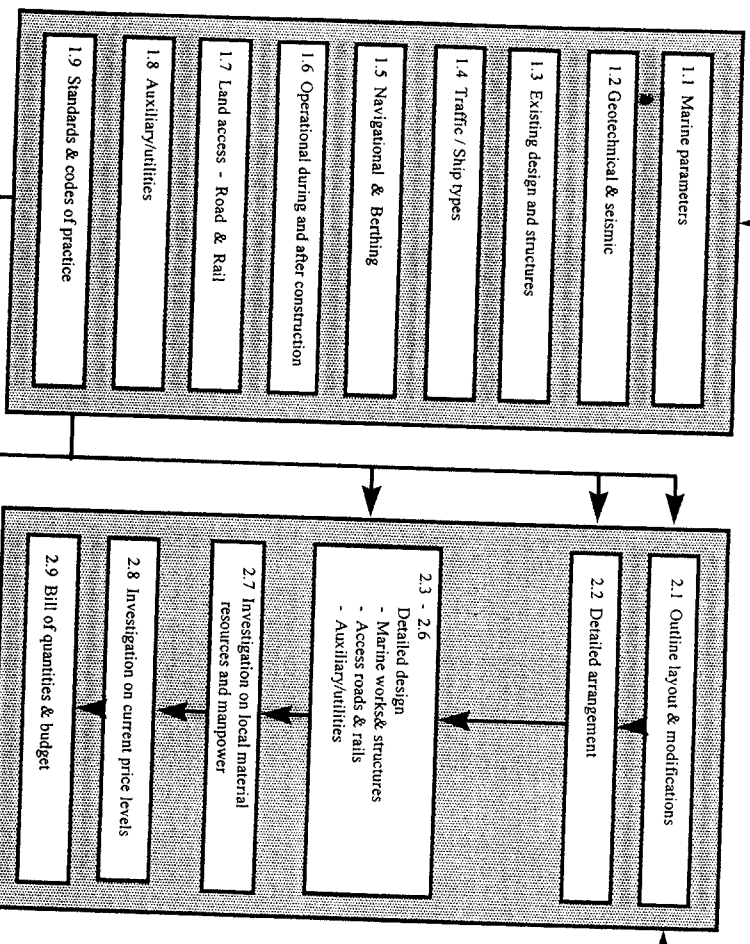
Methodology of Work Programme

Renovation of the Ferry Terminals of Baku and Krasnovodsk
B.4 Work Flow Diagramme

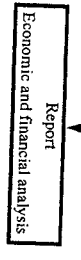
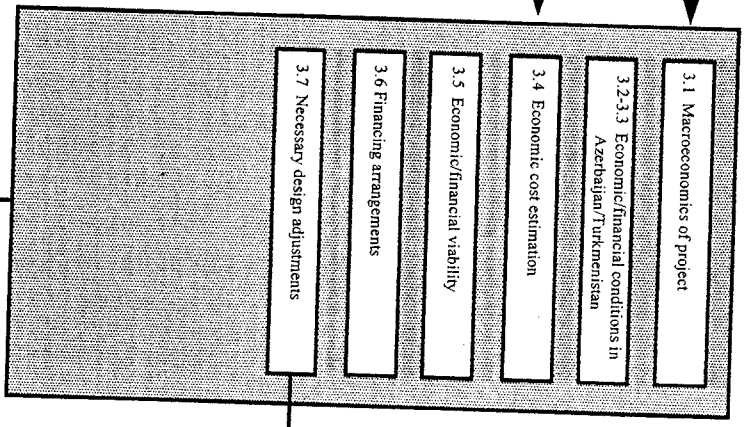
1. Phase
Definition of the design parameters



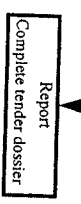
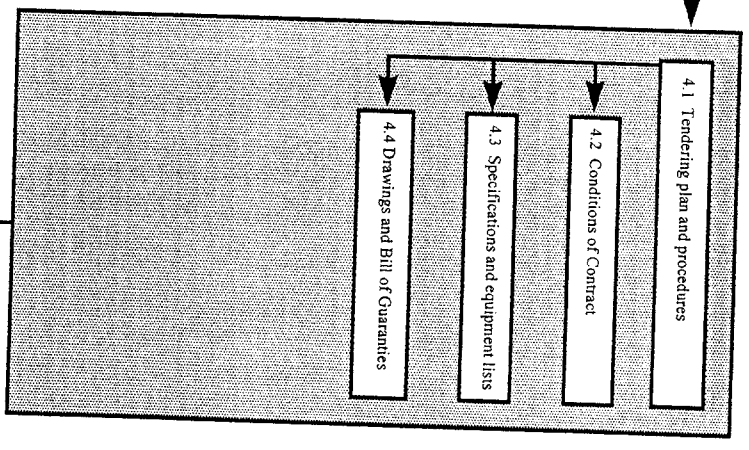
2. Phase
Design of ferry terminals



3. Phase
Economic and financial evaluation



4. Phase
Preparation of International Tender Documents



B.5 Methodology of Project Execution

B.5.1 First Phase: Definition of the Design Parameters

During this phase, the basic conditions which will govern the renovation projects at Baku and Krasnovodsk ferry terminals will be determined and agreed upon. These parameters will include the natural conditions governing the sites, the configuration and state of maintenance of existing structures as well as the traffic conditions and operational requirements to be observed during the renovation phase and the subsequent operational phase. Also codes of practice and standards for design etc. will be defined.

Most of the above background and data is already summarized in the Sofrem/HPC/DeTi report on the port, of July 1995, or exist in the files and archives of Kaspromii-proekt. However, the Consultant will work through and validate all data and supplement the data collection and analysis where required to obtain the full background for the project.

In the following the activities foreseen are briefly outlined. The activities may be modified during the course of the work to fulfill the objectives of the TOR in an optimum manner.

The results of all inspections, analyses and assessments in Phase 1 will be summarized in a comprehensive report which will form the basis for the design of the project. It will contain basic parameters for natural conditions, operational aspects, material coefficients, standards and codes of practice.

The report will be discussed with the Owners and TACIS and possible differences agreed upon before the report is final.

B.5.1.1 Sea Levels, Wind, Waves, Currents, Sedimentation

The Caspian Sea is a unique water basin. It is totally isolated from the World Ocean Level (W.O.L.). One of its peculiar features is a specific pattern of water level fluctuations. It is notable for very large fluctuations during the Quaternary (Leontiev et. al. 1977); even in the 20th Century the fluctuations have been significant. A high level of the Caspian Sea (about 26 m below WOL) was registered during most of the 19th Century, lasting until 1929 (Leontiev, 1988). Since 1929 the level dropped rapidly and by 1941 it had fallen by nearly 2 m. The drop of the water level continued, despite small oscillations (short-term rises in 1946-1948 and 1956- 1958); by 1977 it had dropped down to -29.02 m; at that time the Caspian Sea level was the lowest for the last 200 years.

In 1978 the water level began to rise once more, and by 1990 reached -27,5 m (below WOL); thus, in 12 years it rose by 1.5 m. The fluctuations of the Caspian Sea level are apparently explained by climatic factors and depend on the water balance of its

basin: atmospheric precipitation and river discharge on one hand, minus water loss by evaporation on the other. As was shown by Leontiev (1988), fluctuations of the Caspian Sea level follow cycles of 30-50 years, i.e. they appear to correspond to the climatic cycles discovered by Bruckner at the end of the last century. If this is true, one should expect a further rise of the sea level in the future.

Because of this radical change of the physical situation, the replacement of a regression by a transgression regime, the dynamics of the Caspian coastal zone underwent a significant transformation (Leontiev and Vellev, 1990). In the period of its fall in level in 1929-1977, there was accretion of land areas around the basin owing to drying out of shallow waters and to greater sediment accumulation, to growth of coastal aggradational features in both height and width. Accumulation was thus the dominant process at that time. However, the modern rise of sea level at the rate of 0,125 m/year has led to a tremendous erosion of the coast.

The knowledge of these changes in the dynamics of the coastal zone in relation to sea-level rise is important for economic activities in the Caspian coastal area. This is an urgent and pressing problem also for the major terminals and berths assets in the ports of Baku and Krasnovodsk which are now threatened to become inoperative.

The TOR recommend designs to be prepared for a maximum level of -24 m and a minimum level of -29 m. These assumptions will be carefully tested through study of existing documentation and with the assistance of local experts as well as from Danish Hydraulic Institute who have also studied the matter.

Other parameters of the natural environment to be determined will be wind, waves, currents and ongoing erosion/sedimentation developments.

Wind statistics will be obtained from the official sources including recent observations from the nearest airports at Baku and Krasnovodsk. Wave statistics will be collected from the Ports Authorities or Kaspomniiproekt together with possible current measurements.

With the present rising sea level it is obvious that coastal erosion will be a dominant factor at many locations. Erosion developments which may become threatening to the ferry berth facilities, access roads or other relevant infrastructure will be determined and assessed, to be taken into account in the design phase.

B.5.1.2 Geotechnical and Seismic Conditions

It is stated in the TOR that considerable geotechnical data are available in the archives of Kaspomniiproekt from previous surveys. Considerable soft layers are present in the subsoil of the port locations and existing structures are founded on long piles driven to depths of 15 to 25 m below sea level. Additional soft mud layers may

have accreted at the seabed since the geotechnical surveys of the 1960ies and supplementary investigations shall be carried out.

The following tasks will be carried out:

- Study and summarizing of information and data from the previous geotechnical investigations at Baku and Krasnovodsk Ports.
- Determination of missing data to be procured for the new design work.
- Preparation of specifications for supplementary geotechnical investigations.
- Contracting and execution of geotechnical borings and laboratory tests of a magnitude approx. as stated in the following.

In the unlikely event that these investigations may leave any doubts on certain aspects of the geotechnical parameters, some final tests for verification of the conditions will be included in the work of the constructions contractors for the ferry terminals.

Geotechnical investigations foreseen to be included in the proposed programme (if needed after thorough study of the data available):

- 2-3 geotechnical borings to 30 m depth, or hard soil layers with high bearing capacity, at each of the two ports.
- Soil classification and normal in situ testing in the bore holes, as well as laboratory testing of disturbed and undisturbed samples extracted.
- A number of water-jet soundings or similar tests combined with bathymetric soundings to verify the thickness of soft mud layers and levels of firm seabed in the ferry berth areas.

All geotechnical data will be summarized in a complete report as basis for the design work.

With respect to seismicity, rules and regulations in force will be observed, and this question may also be analyzed through desk study of information from suitable seismic stations. The structures to be built are not especially vulnerable to seismic effects but liquefaction of silt/sand fill below structures may occur, making a reasonably accurate assessment of seismic coefficients necessary.

B.5.1.3 Existing Layout and Structures

The existing main configuration of marine structures is an important input to the design of coming works because re-use of parts of the existing structures as basis for the

new works will normally be economical compared to totally new construction. It is also likely that general space requirements dictate the re-use of existing locations.

Existing structures are well documented from the original projects of Kasporniproekt as well as from the TACIS-TRACECA study carried out by Sofromer/HPC/Deti. Based on this documentation the consultant will make his own assessment of the maintenance status and operational suitability of the structures.

It was clearly seen during the field visit for this proposal that the steel sheet pile walls and other structures are severely corroded after 30 years of use in the corrosive Caspian Sea climate.

The chemical content of the sea water will be noted for use in selection of future protection systems for structural elements.

B.5.1.4 Ferry Traffic Forecasts and Ship Types to be Used

The ferry traffic assessments as described in Section B.5.3 will be initiated already at this stage through and evaluation and possible updating of the forecasts of the recent study mentioned in Section B.5.1 in order to arrive at realistic low/high ferry traffic forecasts to be used in the planning of capacity of facilities. The split between road and rail traffic is an important aspect which will be assessed taking into account the political and economical factors of the region.

The naval architect of the team who has thorough experience with existing ferry types on the world traffic market as well as development trends for car/rail ferries, will prepare a list of parameters for existing and expected vessels to be taken into account.

B.5.1.5 Navigation and Berthing Conditions

The location and layout of the existing ferry berths are made in a way providing regular and easy approach and berthing conditions. Wind and wave conditions also seem to be fairly moderate under normal conditions. Berthing speeds and forces from the existing ferries and possible future bigger vessels will be assessed as basis for design of the berths with fendering and mooring systems.

B.5.1.6 Port Operations and Terminal Capacities during Construction Phase and after Completion

It is essential to keep one ferry berth with access channels in operation at all times during the restructuring work and careful operational planning will be made in coop-

eration with the Ports Authorities, Railway Authorities, etc. in order to arrive at optimum solutions, allowing the estimated traffic to pass.

Assessments of phased increases in road and rail traffic both during the reconstruction period and in the subsequent operational period will be used for the planning of traffic increases, employment of bigger ferries with the associated requirements to ferry berths and other development decisions for the ferry terminals.

B.5.1.7 Land Access Routes by Road and Rail including Parking Area and Shunting Yards

The railway connection to the ports up to the nearest major railway station with shunting yard will be inspected in order to verify the layout, capacity and state of maintenance. Local shunting yards and access tracks to the ferry berths will be inspected in particular. Operational procedures for the transfer of railway wagons will be discussed in details with the competent authorities.

Existing access roads and parking and marshalling areas used will be inspected and their capacities assessed. The present layout has only limited marshalling areas for trucks and cars, and with the increasing road traffic these conditions have to be improved.

Requirements to layout and capacities of the future rail and road connections with shunting yards and marshalling areas, with a possible phased development of construction works will be determined in cooperation with the authorities. The final level of rehabilitated access ways (at least 1.67 m above the adapted max. sea level) will also be determined.

Requirements regarding the access ramps to the ferries, especially permissible slopes and connection arrangements with ferry will be defined.

B.5.1.8 Auxiliary Facilities and Utilities (Electricity, Water, Sewerage Connections)

Auxiliary facilities for a ferry terminal includes items as:

- . Terminal buildings for passengers, truck drivers, etc.
- . Offices for operational staff and manpower as well as controlling authorities (customs, police).
- . Maintenance base for the terminal (mechanical works, utilities, corrosion protection).
- . Water supply to terminal facilities and ferries.

- . Electricity supply with possible emergency generators.
- . Fire fighting system.
- . Sewage disposal piping systems.

The existing facilities and systems will be inspected and recorded and criteria for future development and improvement where required will be defined.

B.5.1.9 Standards and Codes of Practice to be Used for Design

It is expected that mainly Russian standards and codes of practice have been used for the existing facilities. The standards used will be compared with modern Western European standards and if major differences should be revealed within certain types of calculations, structures, etc. the matter will be discussed with the Authorities and Kaspornii-proekt for determination of whether alternative calculation methods should be adapted for certain elements.

B.5.2 Second Phase: Design of the Ferry Terminals

This is the main design phase where detailed planning of the entire ferry terminals will be concluded and design of all elements to be reconstructed, renovated or fully new built will be carried out.

It is planned and agreed with Kaspornii-proekt that this institute will provide a large input of engineering and technician assistance in this phase, and it is foreseen that considerable parts of the projects already prepared by Kaspornii-proekt for the two terminals can be used as basis for the new projects. It is important to utilize the intimate knowledge of the local engineers concerning the natural conditions of the sites and the existing ferry terminal facilities, in combination with the combined Western European expertise from Denmark, Italy and United Kingdom where numerous modern, high-capacity ferry links are in operation.

The full set of design parameters and criteria have been prepared and agreed upon in Phase 1, forming a consistent base for the Phase 2 work. Important basic inputs to the Phase 2 activities are also the study of Sofremer/HPC/Deti (July 1995) (in the following designated: "S/H/D-report") and the above-mentioned projects prepared by Kaspornii-proekt.

In the following subsectors some remarks are made to the various project parts and activities included in Phase 2.

B.5.2.1 Possible Modifications to Port Layout

The first activity of Phase 2 will be to carefully review the existing layout and existing master plan proposals, e.g. in the S/H/D-report in the light of the traffic projections identified in Phase 1, taking into consideration the requirements of modern ferry terminals as e.g. operated in Western Europe.

The general layout of the existing terminals at Baku and Krasnovodsk seem to be regular, efficient port configurations but it is possible that certain smaller or bigger modifications can be useful to fulfill the present and future operational requirements in an optimum way.

These modifications may concern both land based and terminal facilities works, such as quays, parking or shunting areas, offices, access roads and rail tracks, access ramps (including electro-mechanical installations and power supply), fendering systems and devices for the ship-ramp connection, bollards, etc. and external marine works: coastal protection works, dredged channels, sea bottom stabilising and scouring prevention layer in the ferry berth areas, etc.

The overall planning and design criteria will be the following:

- Strong effort to reuse in the new planning and design, if possible and economically reasonable, the existing facilities.
- Optimum layout to ensure a smooth and rapid transfer of rail and road traffic and effective and safe operation of the ferries.
- Reduced costs of construction and maintenance of the overall operation.
- Effectiveness of the Renovation of the two Ferry Terminals also for future variations of Caspian sea level.

B.5.2.2 Detailed Arrangement of the New Ferry Terminals

After determination of possible modified port master plans as mentioned above, the more detailed arrangement of the ferry terminal facilities will be made, comprising the main primary elements, such as:

- Access bridges and ramps to the ferry berths (see below).
- Ferry berth structures: Quay walls for guiding and berthing of ferries with bow and lateral fender systems, bollards, etc.
- Bottom configuration of the berths including possible dredging and scour protection works, taking into consideration future water level variations.

In the design of access ramps the distribution between road and rail traffic as well as individual passenger movement must be taken into account. It should be attempted to

separate traffic flows where possible. In Western European terminals it is customary to arrange overhead, covered bridges for the passenger access, allowing passengers at foot to walk directly from the passenger terminal to the upper deck of the ferry at a level 5-8 m above the quay level where the heavy traffic is moving. At many terminals, also light passenger car traffic is lifted to a level above the trucks/rail traffic by use of elevated access ramps directly from a separate car marshalling area.

It is likely that berths will have to be upgraded both in respect of maintenance conditions and in respect of the top level vis-a-vis traffic movement requirements. Every effort will be made to find a solution which makes the most economic use of the existing structures.

Present fendering and mooring arrangements will be examined as to their adequacy for future needs.

Quay deck levels may require to be raised and the ability of the existing structure to accept the additional dead load will be examined. Where possible, composite action between the old and the new work would be sought.

Rail connections from shore to ship require access ramps with low gradients. Where there is severe tidal variations a solution is to contain the ships in an impounded dock during loading and unloading, as e.g. at the Port of Dover, UK. Such a solution is, however, not feasible at the Caspian Sea where the raise of water level is permanent over the years and not varying over 6-12 hours.

A further variation in level between the ship and the shore occurs as the draft of the ship varies with vehicles loading and unloading. This is normally accommodated by adjusting a bridge linking the ship and the shore.

At the ferry ports on the Caspian Sea it is understood that, due to the rise in water level, this possibility of adjustment has reached the extreme of the upward movement. Consequently vessels must be ballasted in order to maintain the connection with the bridge.

One possible solution lies in structural modification of the dock. However, this must be viewed in relation to the solution adopted for the port area.

A solution could be to arrange a long adjustable access ramp, e.g. constructed as a concrete ramp supported on adjustable bearings.

With suitable intervals (e.g. once a year or every 2 years), when a marked change in the sea level has occurred, the whole level of the access ramp is adjusted by jacking the concrete ramp elements up and placing additional support elements below, resulting in a smooth gradient from the fixed land access area level to the actual ferry ramp level. The smaller operational level variations caused by loading conditions of the ferry, wind surge of water level, etc. is still absorbed by the actual ferry connection ramp between the above-mentioned access ramp and the ferry (see sketch below).

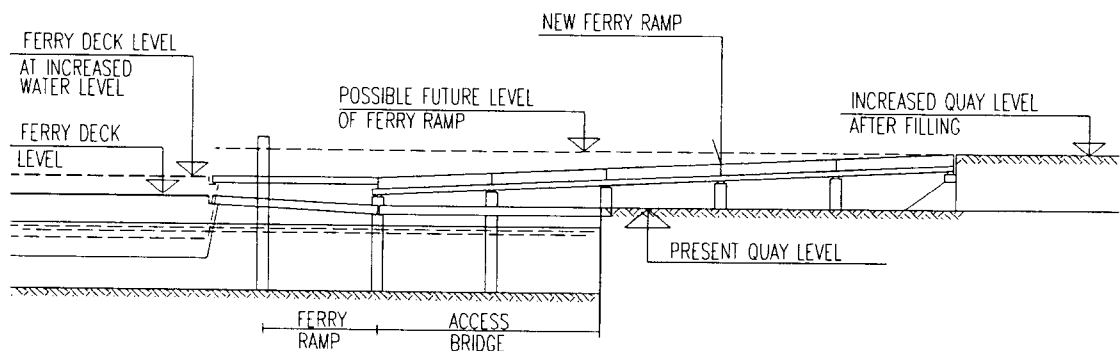


Fig. Possible adjustment ramp for ferry berths.

Rail ferry terminals share many similarities with road vehicle Roll on-Roll off ramps (Ro-Ro terminals) except that Ro-Ro of road vehicles can proceed with large variations between shore and the vehicle deck on the ship, with a maximum steepness of ramp of 1 in 8 allowed.

Ramboll, Acquatecno and Booz Allen & Hamilton have considerable experience in the planning and design of ferry and Ro-Ro facilities and this experience will be of use in the solution of this problem. Ferry terminals in UK and Denmark are subject to considerable tidal and wind surge water level variations and in particular Acquatecno studied a ferry terminal in the port of Pozzuoli (Italy) where bradiseismic movement of the ground level provoke similar problem as the one experienced at the Caspian Sea.

B.5.2.3 Basic Design of Ferry Terminal Structures

When the detailed arrangement of the ferry berths at Baku and Krasnovodsk have been determined, the actual structural design of the facilities can proceed.

The overall criteria for the design work are:

- Design worked out in detail suitable to allow: international tenders, execution of the works without supplementary design work (except for the preparation of workshop details of the steel structures and detailed rebar lists), an accurate and detailed bill of quantities, a realistic budget.

As mentioned earlier the re-use of existing structural elements will be given priority where it can be done without compromising future operational efficiency and flexibility and structural durability of the design elements.

Elements to be designed will in main lines be:

- Access bridges and ramps from the shore facilities to the actual connection ramps to the ferries.
- Connection ramps from land access ramps to the ferries including vertical movement systems. It is foreseen that it may be feasible to introduce hydraulic movement systems (widely used in Western ports) instead of the mechanical systems with heavy counterweights and mechanical winches as used at present - or a combination of both: Basic counterweights balancing and hydraulic adjustment.
- Support structures for access bridges, probably bridge piers on long piling systems with possible re-use of existing piling, subject to check of integrity of piles (inspection, ultra-sound testing, etc.).
- Ferry berth structures: Guiding quay walls with fender arrangements (bow and lateral fenders), mooring bollards, etc., designed for periodic adjustment of fender levels according to sea level rise. These structures shall probably be made as sheet pile structures or other piled structures including cathodic protection systems and other corrosion protection.

In the foundation design of ferry berth structures, possible dredging works for lowering of the seabed in a more distant future with possible decreasing sea level will be taken into account.

- Scour protection of ferry berth seabed. The present rising sea level leads to gradually increased free draft between the ferry bottom and the seabed, reducing the effect of bottom scour from propellers. However, the proper scour protection will be designed based on our ample experience with the matter. Systems using movable structural elements may be used, making possible lowering of the seabed in a more distant future with sinking water level of the Caspian Sea.

B.5.2.4 Basic Design of Upgrading of Coastal Protection Works and Possible Dredged Channels

A rise in mean sea water level as it is occurring in the Caspian Sea, brings problems to the standard of services provided by coastal works and port breakwaters. Indeed the natural coastline is also liable to be eroded and the land behind the shore to be flooded as natural beaches are eroded by storms.

It is foreseen that the approach and marshalling area for railway and road traffic shall be increased in levels, probably by regular filling up the areas with suitable soil. The outer edge of this filled area towards the sea shall be protected by an adequate rubble mound stone protection or similar coastal defence.

The coastal defences of the ports and the adjacent coastline will be examined since any protection works proposed for the port must be seen in conjunction with the coastline.

B.5.2.5 Design of Rehabilitation, Modifications and New Works for Land Access Roads and Rail Connections including Parking/Shunting Facilities

Referring to the new Master Plan of the port there will be the need to rehabilitate and/or modify existing land access roads and railway connections and/or to construct new ones.

In particular the parking and shunting areas behind the ferry berths should provide:

- parking area for trucks, trailers and cars waiting for loading on ferry ships.
- preparation, preselection and preparation of the loading procedure to reduce the ship permanence time in the harbour to a minimum.

Improvement of circulation areas may require until 30-40% of the total area of the yards.

- fast unloading traffic routes without interference with the loading route.
- possibility of consolidation and groupage of goods.
- unloaded trailers deposit.
- entrance with customs and documents checking offices.

At the ferry terminals of Baku and Krasnovodsk it is obvious that the existing railway access tracks and shunting yard facilities have a fairly high capacity, especially in the light of the present change from rail to truck transport. With expected increase in transit traffic from Russia it is, however, probable that a swing-back to increased rail movement will occur. It shall also be borne in mind that it is a general EU transport policy to attempt to enhance rail traffic in order to restrict the rapid increase in road goods traffic.

It could be concluded that the present extent of rail access facilities shall be maintained, although the utilization is not high at present to allow for future development.

The rail facilities will probably have to be shifted to a higher level through a phased dismantling, earth filling procedure and reconstruction of the railway facilities.

As regards road access facilities, these seem to be severely inadequate. It is expected that a complete new layout and arrangement of entrance and exit routes, marshalling

areas for different classes of vehicles, central posts and arrangements for ticketing and customs/immigration control, etc. shall be made, constructed at a suitable level above the sea level.

The access routes and bridges for rail traffic and heavy/light road traffic will have to be carefully planned in order to create as little interference as possible between the different types of traffic.

The access roads and rail systems will be re-designed within the fenced harbour area. Facilities outside the harbour fence is not included in the present project.

B.5.2.6 Basic Design of Upgrading of Auxiliary Facilities and Utilities (Buildings, Electricity, Water, Sewerage Systems)

The modification above mentioned of the existing port layout and components involves of course a new plan of auxiliary facilities and utilities. This plan will comprise both new works and rehabilitation of the existing ones.

The extent of necessary new construction or rehabilitation of buildings and utilities (electricity, water, sewerage systems) will be determined during Phase 1 and the design activities carried out in this Phase 2. In the Inception Rreport a detailed planning of such works will be included.

B.5.2.7 Investigation Regarding Availability and Cost of Local Natural Materials, Local Manpower, etc.

An investigation aiming to evaluate costs and availability of local materials such as rock stones, sand, concrete, steel bars, electrical supplies, etc. will be carried out.

The same activity will be done for manpower and building yard machinery through interviews with local contractors and the experience of Kasporniiiproekt and the Ports Authorities.

B.5.2.8 Assessment of Current International Price Level for Works in the Area

The unit prices in the area for internationally tendered works will be evaluated through experience of the consultants of international price levels for this type of works.

These price levels are considerably influenced by different aspects such as those treated in B.5.2.7, and by additional transport costs, cost of travelling and of accommodation, etc. These aspects will be preliminarily investigated.

B.5.2.9 Bill of Quantities for the entire Projects of Baku and Krasnovodsk and Budget Pricing

On the basis of all the design documents produced, including a set of drawings and associated calculation notes (two separate set of documents for each Ferry Terminal), a detailed bill of quantities and budget will be prepared.

The budget price will be based on the Bill of Quantities and the prices estimated as mentioned under B.5.2.7 and B.5.2.8 above.

This designed budget will need the approval of the Port Authorities and of TACIS and will be evaluated from economical and financial points of view during the following third phase.

B.5.3 Third Phase: Economic and Financial Evaluation

The overall objectives of this phase of the project will be to evaluate the economic and financial viability of the project and paying specific attention to terminal design, operations and ferry traffic factors. This will be derived from a macroeconomic analysis on a regional basis and the countries directly involved in the project with particular emphasis on existing and expected trade developments and patterns. Cost estimates for operations and expected revenues will be used to develop profitability projects and to assess alternative financing arrangements and possible modifications to the project.

The work to be performed in this phase is developed in to seven tasks described below. It should be listed that there is a correlation between the project activities undertaken in this phase with traffic forecasts prepared during the first phase (2.6.1.4.)

B.5.3.1 General Overview of Macroeconomic Factors Affecting the Projects

The purpose of this task will be to evaluate the overall macroeconomic developments in the regions that will be considered as the hinterland between the two ports, i.e. Baku and Krasnodar. Particular emphasis will be given to trade developments and the resulting transport requirements that will be emerge through the opening of trade routes linking the central Asian republics in the hinterland of Krasnovodsk and Azerbaijan, Armenia, Turkey and the Black Sea region of Russian in the hinterland of Baku. Opportunities

for intermodal transit trade through the ports of Turkey and overland to and from European destinations will also be evaluated.

The main sources of macroeconomic data will be derived from statistics of the respective countries in addition to data collected by international organisations such as the World Bank and EBRD together with other EU source documents. In addition representatives for major industrial enterprises, trade organisations located in the regional hinterland and transport organisations currently serving or having the potential to serve these markets will be contacted and interviewed to supplement the information derived from public sources. Data on the existing and planned transportation infrastructure serving the regional hinterland will also be collected and analysed.

B.5.3.2 Macroeconomic Trade and Transport Conditions Prevailing in Azerbadjan

The purpose of this task is to perform a more detailed and comprehensive analysis of the macroeconomic factors impacting the trade and transportation developments in Azerbadjan as the immediate hinterland of Baku. Data on macroeconomic factors on major industries and trade will be collected and analysed. Primary sources will be governmental agencies, economic institutes plus data collected by international financial institutions such as the World Bank, EBRD etc. Major industrial enterprises and transportation companies that may be potential users of the Trans-Caspian Sea transportation services will be contacted and interviewed to supplement data obtained from public statistical sources. Data on existing and planned transportation infrastructure connection the port of Baku to the hinterland will also be collected and analysed.

Data and trends on passenger traffic patterns and expected developments in Trans-Caspian Sea passenger transportation requirements will also be assessed.

B.5.3.3 Macroeconomic Trade and Transport Conditions Prevailing in Turkmenistan

Data collection and analysis will be performed with respect to Turkmenistan as described in task B.5.3.2. above.

The data collected and analysed in tasks B.5.3.1., B.5.3.2. and B.5.3. will be used to forecast trade flows that have the potential to be channelled through a ferry service between Baku and Kranovodsk will be assessed. Alternative route options with time and cost estimates will be developed to evaluate likely transport patterns that may emerge in terms of:

- i. Local traffic flows to and from the immediate hinterlands in Turkmenistan and Azerbadjan

- ii Regional traffic flow to and from the enlarged region behind the ports
- iii Transit traffic flows extending beyond the regions (e.g. Europe, overseas destinations etc)

Forecasts will be developed based on alternative scenarios of economic development and growth, i.e. high growth, moderate growth and no growth/stagnation. This data will be used as input to and combined with the preliminary data developed Task B.5.1.4. to develop a final ferry traffic forecast and to assess the types of ships that will be deployed in the service.

B.5.3.4 Operational Cost Estimation for Both of the Terminals

The primary inputs for this task will be the overall costs data derived from the Second Phase: Design of the Ferry Terminals combined with estimated operating costs. The latter will be based on cost data from the operation of similar terminal tempered with the local salary and wage levels and other local inputs. An overall organisation structure and manning requirements will also be developed as part of this task, since next to the capital costs labour costs will most likely be the major costs factor.

The results of this tasks will be summarised in the form of an operational cost budget presenting the major operational cost categories under different operating scenarios in terms for ship calls and cargo flow projections developed in Task B.5.1.4.

B.5.3.5 Economic and Financial Viability Assessment of the Terminals

In this task expected revenues will be projected based on the forecasted passenger traffic, cargo flows and ship calls under the various scenarios. This will be achieved through the development of a proposed tariff for the changes that can be assessed for the services provided by the respective ports to the users of the ports. The tariffs will be based on those of similar ports in the region and elsewhere in the world and adjusted for the market and competitive situation locally. The revenue forecasts will be combined with the costs budget developed as part of the Task B.5.3.4. to present an overall profitability and cash flow analysis. This will be analysed in terms of the expected investment using normal financial analysis methods to assess the overall financial viability of the project.

The viability of the project will also be assessed in terms of the expected economic impact of the passenger and cargo traffic generated on the economies of Turkmenistan and Azerbadijan respectively. For this purpose economic impact models developed by Booz-Allen & Hamilton for American ports will be adapted for the local conditions in the two countries.

B.5.3.6 Debt Servicing Analysis for the Most Likely Financing Arrangements

The type of financial instruments and overall financing that will be used and will be available to this project will be a function of the financial viability and expected cash flow and sources of financing that will be available given the overall situation in the respective countries and the collateral available. Alternative financial instruments and packages that may be used to finance the development of the respective ports with terms such as interest rates, repayments schedules etc will be assessed. The impact of and benefits and drawbacks will be evaluated in view of the respective ports.

For this purpose a financial model will be developed to simulate alternative financial structures and their impact on the overall viability of the port development projects of the respective ports.

B.5.3.7 Possible Modifications to the Design of the Port

The analyses performed in Phase 3 may indicate the need to make modifications to the overall design, such as:

- i Downsizing or enlarging the facilities based on expected cargo flows
- ii Investment in special cargo handling equipment based on trade opportunities identified
- iii Investment in labour, operational, equipment and cost saving devices
- iv Modifications to ensure profitability (e.g. downgrade facilities to reduce overall investments and thereby achieve an acceptable profitability)

The main objectives of this task will be to perform a combined review of the technical and financial/economic tasks to identify areas of optimisation of technical performance and financial viability. As such this will be in iterative process using the financial model developed in the previous task to simulate the impact and consequences of changes and modifications to achieve an optimal overall structure both from a technical and operational as well as financial viewpoints. Close coordination and cooperation with other project phases will be maintained to ensure an effective, efficient and economically viable project is specified for detailed design and tendering procedures.

B.5.4 Fourth Phase: Preparation of International Tender Documents

During the fourth phase a full set of tender documents of international standard shall be prepared for each of the two lorry terminals in the ports of Baku and Krasnovodsk. The documents will be prepared in both English and Russian.

B.5.4.1 General Plan for Tendering Procedure and Documents

It is assumed that the works at both terminals will be tendered out in one full turn-key contract, but alternatives can also be discussed such as tendering each of the terminals as a turn-key contract for one terminal with supporting infrastructure. If it is found advantageous, through discussions with the Port Authorities, to divide the works at each terminal in 2-3 well defined packages (e.g. to split the contract between marine works, land access infrastructure (road rail facilities) and terminal building works) this would also be a possibility. However, due to interface problems between the various contracts works it is recommended not to split up into too many parts. One total contract is easier to manage as regards responsibility of contractors and although the total price during tendering may be slightly higher than the sum of smaller contracts, the final cost of the works may end up cheapest, because the interface problems may result in additional works to be paid by the Owner.

According to the selected way of tendering, a plan for the necessary tender documents will be agreed with the owner, comprising in main lines:

- Conditions of Contract
- Technical Specifications
- Drawings
- Bills of Quantities

B.5.4.2 Conditions of Contract

The general and special conditions of contract will be based on a selected standard system, internationally known and recognised, such as the FIDIC documents. If a specific financing organisation such as World Bank or EBRD should have been identified at this stage, the set of documents used by that organisation will be used after agreement with the Owner.

The special conditions will be carefully adapted to the projects in order to ensure a smooth and efficient progress of the works leading to the correct quality and timely completion of the projects. As mentioned in the T.O.R. it is important to adapt the optimum scheme for advance payments and periodic instalments during the works, as well as sufficient retention for guarantee obligations during the contractual maintenance period.

B.5.4.3 Technical Specifications

Annex 5

Revised Staffing Schedule

REVISED STAFFING SCHEDULE

Project title : Port Network Plan and Improvement Programme.		Project number : TNREG 9403/P507		Country : Azerbaijan and Turkmenistan											
Planning period : 01.04.1996 - 31.03.1997		Prepared on : 21.05.1996		EC Consultant : Consortium RAMBOLL											
Project objectives : Renovation and Modernization of the Ferry Terminals in Baku and Turkmenbashi.															
Name	Position	Months												INPUTS	
		1996												1997	
		4	5	6	7	8	9	10	11	12	1	2	3	Home	Field
<u>International Consultants</u>															
Hans Hartelius	Project Director	XX			0			0		X			XX	0.5	1
Carsten Sørensen	Project Manager / Port Planner	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	0000	XXXX	XXXX		10
Jørgen Lisby	Port/Marine Engineer	XX	XXXX		00	00XX	0000	00				00		4.5	1
Lars Nejtsgaard	Port/Mechanical, Ferry Ramp Expert	X	XXO		00	00XX	00				00			3.5	0.5
Michael Høgedal	Port/Marine Hydraulics Specialist		XXXX					XXXX				XXXX		0.5	0.5
Lars Raunholt	Port/Marine Engineer		XXXX		XXXX	XXXX	XXXX	XXXX	XX						6.5
Bjarne Jensen	Electrical Engineer					XX					00			1	0.5
Jan Haase	Naval Engineer		XO								00			0.5	0.5
Ole Kien	Railway Engineer						XX				00				1
Dagfinn Moe	Economist		XX					00	00	XXXX	XX			1	2
Dennis Hayter	Financial Analyst							00		XXXX				0.5	1
	Resource Panel		=	=	=	=	=	=	=	=	=	=	=	1	1
	Technicians		0000	00	0000	0000	0000	0000	0000	00	0000	0000	0000	10	4
Total														23	29.5
<u>Local Consultants</u>															
	Engineers				XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX		34
	Special Advisors				=	=	=	=	=	=	=	=	=		3
	Technicians		XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX		7
	Surveyors		XXXX		XXXX										3
	Interpreters	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX		12
Total														23	59
TOTAL														23	84.5

XXX = Field

000 = Home Office

== = Part-time