



Supervision of supply of an
optical cable for
communication and signalling
to the railways of Azerbaijan,
Georgia and Armenia
Inception Report

7 July 2000

Form 1.2. REPORT COVER PAGE

Project Title: Supervision of Supply of an Optical Cable System for Communication and Signalling to the Railways of Azerbaijan, Georgia and Armenia

Project Number : Traceca1999

Country : Azerbaijan, Georgia, Armenia

	Local Operator	Local operator	Local Operator	EC Consultant
Name	Azerbaijan Railways	Georgian Railways	Armenian Railways	Finnroad Oy
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Date of report : 7.7.2000

Reporting period : Inception report

Author of report : MM/Finnroad, IK/Railtelia

EC Monitoring team _____
[name] [signature] [date]

EC Delegation _____
[name] [signature] [date]

TACIS _____
[task manager] [name] [signature] [date]

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1. Project Synopsis

Form 1.3 PROJECT SYNOPSIS

Project Title:	: Supervision of Supply of an Optical Cable System for Communication and Signalling to the Railways of Azerbaijan, Georgia and Armenia
Project Number	: Traceca1999
Country	: Azerbaijan, Georgia, Armenia

Wider objectives:

The wider objective of the programme in Caucasus is the support the full use of the Traceca transport corridors through Caucasus and provide means for efficient transmission of telecommunications data for both railways and private telecommunications companies throughout the Caucasus region. It will enhance safety and security for railway operations and simultaneously enable the private telecom operators to penetrate the trans-Caucasus communications market.

Specific Project objectives:

The objectives of this consulting assignment is to provide technical supervision of the manufacture, supply, installation, witness testing jointly with the Railways and hand-over of the optical cable system, as well as monitoring that adequate training and transfer of know-how is provided by the supplier. The consultant provides also certificates for partial and final acceptance.

Outputs:

Optical cable system installed and operational according to specifications and approved by the Supervision consultant and Recipients

Inputs:

Supervision will include monitoring and approval of manufacture and factory tests, monitoring of works progress on site, monitoring and approval of partial field testing and final testing, provision of certificates to the Contractor on accepted deliveries. Supervision will be carried out using part time expatriate principal supervisor, part time expatriate technical supervisors, as well as part time local supervisors one in each country.

Project Starting Date: 6.5.2000

Project Duration: 24 months

2. Analysis of the Project

2.1 Start situation

Contractual Situation

The contract between EC and the Supervising Consultant has been signed on May 6, 2000. The contract between EC and the Contractor has been signed on May 16, 2000.

Responsibilities of parties in the implementation

The supply of cables, pipe, equipment and system as well as the installation and connection of the system will be the responsibility of the Contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Railways in each country. The role of the Supervising Consultant will be to monitor project progress, witness testing jointly with the Railways, and provide certificates for partial and final acceptance.

2.2 Mobilization and inception phase

General

The project started with a two-month inception phase. The beginning has been carried out in home office and within EU (full time for the Supervising Engineer, part time for the Project Director) studying the documents and having initial meetings with the Task Manager and the Supplier as well as collecting and verifying the technical materials. The first meetings with each of the recipient railway companies and the Contractor have been organized in the project countries during the inception phase.

The technical proposal of the Contractor has been studied to ensure that the proposed system is in compliance with the technical specifications.

The project organization and counterparts have been clarified, the establishment of Coordinating Teams for project supervision and monitoring in each country have been nominated.

Contractor's preliminary work plan was introduced in the kick off meetings. The work programme and contents for the assignment has been worked together with the recipients and Contractor in order to agree on a smooth and realistic implementation schedule for the project. The supervision, testing and acceptance programme of the Consultant will be finalized based on the supply schedule.

The duties of our local experts have been specified. The agreements with our Azerbaijan, Armenian and Georgian local supervisors have been finalized.

Risks

One of the key aspects for the smooth and timely implementation of the project is the correct timing of activities on Contractor's side who will provide the cable and systems, and the three railways organizations' side who will provide civil works. The project also needs the co-operation of the Governments for successful conclusion.

The supply of cables, pipe, equipment and system as well as the installation and connection of the system will be the responsibility of the Contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Railways.

Contractor's preliminary work plan was introduced in the kick off meetings. Due to the Contractor's slow start it was not possible to finalize and agree the time schedule and work plan during the inception phase. Anyhow, the slow start is unlikely to cause delays in the overall project implementation schedule.

Armenian Railways had not started the detailed designs of cable installation in May. Design of the civil works should be completed by 30.9.2000.

The Railways have pointed out that they don't have suitable equipment for cable blowing. Since the supply of cable blowing equipment is not included in the contract, there is a potential risk of delays in the project progress in installing the cable. The Contractor has agreed to provide the Railways with contact details of cable installation contractors in the region.

Kick Off Meetings

Kick off Meetings were held in Azerbaijan, Georgia and Armenia between 19-25.5.2000. All meetings were participated by representatives of the Recipient, Contractor and Supervising Consultant. The meeting in Azerbaijan was in addition participated by the Tacis Task Manager for the Project.

Project Coordination Team

The representatives of the Project Coordination Team were nominated in the Kick Off Meetings. The Coordinators are:

- Azerbaizan railways, Mr Karaev
- Georgian Railways, Mr Melkadze
- Armenian Railways, Mr Barseghyan
- Contractor, Mr Friedrich
- Supervising Consultant, Ms Koskela

The role of the Coordination Team will be to keep all parties fully informed of project status and progress, to identify potential problems at an early stage as well as find solutions to the problems.

In addition it was noted that the TRACECA programme coordinators in Caucasus will provide assistance and advise during the implementation of the project and may attend the coordination meetings.

Civil Works Situation

Azerbaijan Railways has carried out the preliminary designs of cable installation on the whole section in Azerbaijan territory. The design document was presented in the meeting. Next step will be for the Contractor to conduct site survey, and to review and provide guidance to the Railways to finalize the civil works design. The Railways representative stated that they will provide a locomotive and wagon to the Contractor for the site survey work.

Georgian Railways has carried out the designs of cable installation on the whole section in Georgian territory, except for the section between Santredia and Supsa, which was added to the contract during negotiation stage. Design of that section will take about one month. The other design documents were presented in the meeting. Next step will be for the Contractor to conduct site survey, and to review and provide comments to the Railways on the civil works design. The Railways representative stated that they are ready to start with the civil works for the cabling immediately after receiving the installation pipe. The reconstruction of the technical rooms are already underway.

Armenian Railways have not started the designs of cable installation. Financing of the designs is now available and the selection of designer will be done shortly. Design of the civil works will be completed around 1.10.2000. Simultaneously the Contractor will conduct site survey, and will review and provide comments to the Railways on the civil works design.

Testing and approval programme and final time schedule

It was agreed in the kick off meetings that the Contractor and Consultant will agree on the testing and approval programme after the Contractor has prepared the final work programme and time schedule for the project.

After that final time schedule and work programme for the whole project, including testing and approval schedule, will be presented to the railways and agreed together by the Railways, Contractor and Supervisor.

3. Project Planning

3.1 Approach

Our approach for the implementation of the assignment is based in the following principles

1. Periodic supervision missions to all three countries

After the inception period our EU Experts will carry out supervision missions to the project countries on an average of every three months in order to monitor the progress of civil works, installation of cable and installation of transmission system. The testing of sub-components of the system will be carried out during these visits.

2. Cooperation with local partners and counterparts.

The daily supervision work between EU expert missions will be carried by the local experts, who will be in touch with our head office whenever required. Local experts will mainly be responsible for the civil works monitoring as well as general duties like adequacy of Contractor's quality assurance system and methods for supervision of cable laying and implementation of cable connecting work. We will also keep contact with the beneficiary throughout the project implementation in order to ensure good cooperation, transfer of know-how and timely execution of their part of work.

3. Factory testing and acceptance of the cable and systems

We will carry out monitoring and supervision at the Contractor's factory in order to make sure that the product will comply with the technical specifications and that the production methods and quality assurance systems are acceptable.

4. Emphasis on the critical issues in timing of works.

We understand that one of the key aspects for the smooth and timely implementation of the project is the correct timing of activities on Contractor's side who will provide the system, and the three Railways organizations' side who will provide civil works.

5. Equal cooperation with all three countries.

Because of the international nature of the work and three countries involved we will keep adequate contacts with all involved organizations and keep all authorities as well as transport operators informed of developments in the project in order to enhance the project's attraction and visibility as well as cooperation between the countries. We will also keep contact with the Tacis Coordination Units operating in these countries and look for their assistance whenever required.

3.2 Duties of the Supervision Consultant

The duties of the supervision assignment include the following tasks:

a) Overall supervision of the project

Throughout the project duration the consultant will supervise and monitor the implementation of the project and make reports on all deviations and foreseen problems.

The site supervision work will be carried out on a weekly basis through site visits carried out by the local subconsultants (using 1-2 days per week in each country), and these visits will be supported with approximately three-monthly expatriate Supervising Engineer's visits to the sites. This will ensure continuous monitoring of the progress of works. The partial acceptance tests, max 13pcs, and system acceptance test and test of completion will be organized in connection with the Supervising Engineer's site visits.

b) Ensure the compliance of the system with the technical specifications

The consultant is studying the technical specifications and the Contractor's proposal and contract, and check that the proposed system complies with the specifications. The consultant will also monitor and carry out factory acceptance tests for both the cable and the system components.

c) Approval of the technical documents related to the design, manufacturing and installation of the system

The consultant will assess approve the following documents and processes:

- The overall transmission architecture network
- The high level design document
- The procedure for the optical cable connections
- The factory and site acceptance test procedures
- The operation and maintenance manuals

d) Witnessing the progress of works

The consultant shall witness according to a sampled and selected witness program the following activities (*agreed between the consultant and contractor in the inception phase*):

- The on-site installation of optical cable, transmission and telephone equipment
- The partial acceptance tests
- The factory acceptance tests
- The system acceptance tests
- The completion tests

e) Participation in the project start meetings

The consultant will participate in the project meetings in all three countries, organised by the national railways between the contractors and the beneficiaries in order to be fully aware of project progress and problems at all times.

f) Reporting

The Consultant will monitor the project performance progress on a regular basis and keep Tacis regularly informed.

We will prepare quarterly reports on the project progress to the Tacis Task Manager and Tacis Coordinating Units in Azerbaijan, Armenia and Georgia. We suggest that the reports will be also delivered to all three recipient railway companies.

In addition to the general reporting, we will immediately inform Tacis in case of technical problem, non-conformity or delay in the project implementation.

The draft version of the final report of the project will be published at the end of Month 23 and final report one month later.

g) Certification

The consultant will provide Tacis with the following certificates:

- Certificates of Delivery (*Railways will issue for cable supply*)
- Certificates of Progress
- Certificates of Completion
- Certificates of Compliance

h) Environmental monitoring

The consultant will monitor specifically the environmental impact of the project and the compliance with European environmental standards and practices related to the execution of works, disposal of waste materials, etc. and will keep Tacis informed on a regular basis.

3.3 Relation/co-ordination with other projects

The objective of this consulting project is to monitor the supply of an optical cable system for communication and signalling to the Railways of Georgia, Armenia and Azerbaijan (Tender No MC 9901). Throughout the project duration the consultant will monitor the implementation of the project and make reports on progress and all deviations and foreseen problems to the Tacis Task Manager and Tacis Coordinating Units in Azerbaijan, Armenia and Georgia.

3.4 Project goals or objectives

The wider objective of the programme in Caucasus is the support the full use of the Traceca transport corridors through Caucasus and provide means for efficient transmission of telecommunications data for both railways and private telecommunications companies throughout the Caucasus region. It will enhance safety and security for railway operations and simultaneously enable the private telecom operators to penetrate the trans-Caucasus communications market.

The objectives of this consulting assignment is to provide technical supervision of the manufacture, supply, installation, witness testing jointly with the Railways and hand-over of the optical cable system, as well as monitoring that adequate training and transfer of know-how is provided by the supplier. The consultant provides also certificates for partial and final acceptance.

3.5 Intended results or outputs

Inception Report

Project Progress Reports every third months

Final Report

Informing Tacis immediately in case of technical problem, non-conformity or delay

Approval of the certificates

Approval of the following documents:

- the overall transmission architecture network
- the high level design document
- the procedure for the optical cable connections
- the factory and site acceptance test procedures
- the operation and maintenance manuals

3.6 Constraints, risks and assumptions

Risks

One of the key aspects for the smooth and timely implementation of the project is the correct timing of activities on supplier's side who will provide the cable and systems, and the three railways organization's side who will provide civil works. The project also needs the co-operation of the Governments for successful conclusion.

The supply of cables, pipe, equipment and system as well as the installation and connection of the system will be the responsibility of the contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Railways.

Contractor's preliminary work plan was introduced in the kick off meetings. For the supplier's slow start it wasn't possible to finalize and agree the time schedule and work plan during the

inception phase. Anyhow, we don't believe this will cause delays in the project progress as a whole.

Armenian Railways have not started the designs of cable installation in May. Design of the civil works should be anyhow completed by 30.9.2000.

The Railways have pointed out that the Railways don't have suitable equipment for cable blowing. Since the supply of cable blowing equipment is not included in the contract, there might be some delays in the project progress in installing the cable.

3.7 Planning for next reporting period

Throughout the project duration the consultant will carry out periodic supervision of project progress, approval of designs, testing and approval of installations, monitoring and reporting to Tacis. Reports will be produced quarterly but in each report we will present plan for next six months.

Next report will be issued after the next expatriate visit to the sites in October.

Consultant tasks during next period (>> 31.12.2000)

- ensure compliance with Technical Specifications
- finalizing the time schedule
- monitoring high level design
- approval of high level design documents
- monitoring production procedure
- issue factory test procedure
- approval of the factory test procedure
- monitoring cable laying in Georgia

Detailed project planning and high level design documents will be about 75% completed by the end of September.

3.8 Reporting

The reporting for the project will be carried out in accordance with the Terms of Reference. After this Inception report the next progress report will be published at the end of month 5 and from then on a three-monthly basis. The reports will be delivered to the Tacis Task Manager, Tacis Coordinating Units and to all three recipient railway companies.

The inception report summarizes the start-up phase and makes recommendations, if necessary, on changes to the work plan, scope or methodology. Progress reports will summarize progress from the beginning of the project, deviations, problems and suggested solutions, and present a work plan for the next six months.

The progress reports will include all the relevant below mentioned topics 1-7 :

1. Overall supervision of the project

2. Compliance of the system with the technical specifications
3. Approval of the technical documents related to the design, manufacturing and installation of the system (if any)
4. Witnessing the progress of the works
5. Participation in the project meetings
6. Certification (if any)
7. Other issues (if any, e.g. Environmental monitoring)

LIST OF ANNEXES

Annex 1: FORM 1.4 OVERALL PLAN OF OPERATIONS

Annex 2: FORM 1.5 OVERALL OUTPUT PERFORMANCE PLAN

Annex 3: FORM 1.6 PLAN OF OPERATIONS FOR THE NEXT PERIOD

Annex 4: MINUTES OF START-UP MEETINGS

FORM 1.4. : OVERALL PLAN OF OPERATIONS

Project title : Caucasus Optical Cable System Supervision				Project number : Traceca1999				Country : Azerbaijan, Georgia, Armenia				Page :						
Planning period : 05/2000 – 05/2002				Prepared on : 07.07.2000				EC Consultant : Finnroad with Railtelia, Helsinki										
Project objectives : Specific objective of this supervision project is to assure the proper technical execution of the supply of an optical cables system for communication and signalling to the railways of Azerbaijan, Georgia and Armenia. The overall objective is to improve communication systems, promote the full use of TRACECA corridor as well as to increase competition in the telecommunications sector in Caucasus.																		
No	MAIN ACTIVITIES	TIME FRAME												INPUTS				
		2000				2001				2002				PERSONNEL		EQUIPMENT AND MATERIAL	OTHER	
		1	2	3	4	1	2	3	4	1	2	3	4	EC Consultant	Local Experts			
1.	Inception phase																Office equipment and supplies	12 int'l flights
2.	Monitor and approval of high level designs																	16 regional flights
3.	Monitor production and testing																	Per Diems as per contract
4.	Monitor site preparation Georgia																	Vehicle hire as per contract
5.	Monitor cable laying Georgia																	
6.	Monitor site preparation Armenia																	
7.	Monitor cable laying Armenia																	
8.	Monitor site preparation Azerb.																	
9.	Monitor cable laying Azerbaijan																	
10	Monitor equipment installations																	
11	Testing and commissioning																	
TOTAL												208 d	350 d					

FORM 1.5 : OVERALL OUTPUT PERFORMANCE PLAN

Project title : Caucasus Optical Cable System Supervision	Project number : Traceca1999	Country : Azerbaijan, Georgia, Armenia	Page :
Planning period : 05/2000-05/2002	Prepared on : 07.07.2000	EC Consultant : Finnroad with Railtelia, Helsinki	
Outputs (to be described and target dates indicated)	Agreed Objective Verifiable Indicators	Constraints and Assumptions C/A	
1. High level design completed by Supplier (15.10.00)	1. Design document checked and approved by Consultant	1. A: Civil works design in Armenia should be completed by 30.09.00	
2. Cable and equipment production completed by Supplier (31.01.01)	2. Factory test procedures approved by Consultant, complete testing documentation provided by Supplier	2. ..	
3. Site preparation completed by Railways in all 3 countries (28.02.01)	3. Site approval letters issued by Supplier to each Recipient	3. A: Supplier will specify site requirements by 31.10.00	
4. Cable delivery completed by Supplier in all 3 countries (28.02.01)	4. Delivery approval protocols for each country jointly signed by Recipient and Supplier	4. ..	
5. Cable laying completed by Railways in all 3 countries (31.08.01)	5. Civil works approved by Supplier, cable joint test results submitted by Supplier	5. C: No suitable cable installation equipment known to be available in Azerbaijan and Armenia A: Supplier to provide names of qualified contractors to Recipients by 31.07.00	
6. Equipment delivery completed by Supplier in all 3 countries (28.02.01)	6. No. and type of equipment verified by Consultant to match with the supply contract	6. A: Consultant can check delivery upon arrival in one location in each country	
7. Testing of the system completed by Supplier (10.05.02)	7. Partial Acceptance Test reports, System Acceptance Test reports and Test of Completion reports provided by Supplier and approved by Consultant	7. ..	
8. Training of system operators completed by Supplier (10.05.02)	8. Lists of trained staff in each country including signed presence sheets, as well as contents and material of each training course submitted by Supplier and approved by Recipient	8. A: Adequate number of qualified trainees will be made available by each Recipient	
9. Operation and maintenance manuals and as-built drawings of system delivered by Supplier to the Recipients (30.04.02)	9. O&M Manuals approved by Consultant, as-built drawings approved by Recipients	9. A: Translations of all manuals shall be made by qualified telecom technical translators	
10. System handed over to the Recipients (15.05.02)	10. Certificate of Acceptance issued by each Recipient, Certificate of Completion issued by Consultant	10. C: Consultant's contract expires before the handing over of the system	

Annex 2.

Form 1.6. PLAN OF OPERATIONS FOR THE NEXT PERIOD (Work programme)

Project title : Caucasus Optical Cable System Supervision				Project number : Traceca1999				Country :Azerbaijan, Georgia, Armenia				Page :	
Planning period : 07-12/2000				Prepared on : 07.07.2000				EC Consultant : Finnroad with Railtelia, Helsinki					
Project objectives : Specific objective of this supervision project is to assure the proper technical execution of the supply of an optical cables system for communication and signalling to the railways of Azerbaijan, Georgia and Armenia. The overall objective is to improve communication systems, promote the full use of TRACECA corridor as well as to increase competition in the telecommunications sector in Caucasus.													
		TIME FRAME						INPUTS					
		Second half / 2000 (months)						PERSONNEL		EQUIPMENT AND MATERIAL	OTHER		
No	ACTIVITIES	07	08	09	10	11	12	EC Consultant	Local Experts				
1.	Inception report										Office equipment Flights + DSAs as per contract		
2.	Ensure compliance with Technical Specifications												
3.	Final time schedule												
4.	Monitor high level designs												
5.	Approval high level designs												
6.	Monitor production												
7.	Issue factory test certificates												
8.	Monitor Cable laying Georgia												
TOTAL							60	100					

Annex 3.

SUPPLY OF AN OPTICAL CABLE FOR COMMUNICATION AND SIGNALLING TO THE RAILWAYS OF GEORGIA, ARMENIA AND AZERBAIJAN

PROJECT START-UP MEETING IN BAKU, AZERBAIJAN 19.-20.5. 2000

MINUTES OF THE MEETING

Participants:

Azerbaijani Railways:	Mr Panahov Mr Karaev
European Commission:	Mr Niemi
Contractor (Siemens):	Mr Friedrich Ms Konigs
Supervisor (Finnroad):	Mr Mannonen Ms Koskela
Traceca Coordination Unit:	Mr Graille Mr Turdzeldze

1. Opening and introductions

The agenda of the meeting was introduced and approved. The parties of the project were introduced.

2. Present status of project

Project Coordination Team

It was agreed that each party will nominate one coordinator for the project. The Coordinators are:

- Azerbaijan Railways, Mr Karaev
- Contractor, Mr Friedrich
- Supervising Consultant, Ms Koskela

The role of the Coordination Team will be to keep all parties fully informed of project status and progress, to identify potential problems at an early stage as well as find solutions to the problems.

In addition it was noted that the TRACECA programme coordinators in Caucasus will provide assistance and advise during the implementation of the project and may attend the coordination meetings.

Contractual Situation

The contract between EC and the Contractor has been signed on May 16, 2000. The contract between EC and the Supervising Consultant has been signed on May 6, 2000.

Hi, Matti, first page is without change. Have you any information about cable blowing equipment? Its price etc. Sincerely Yours Mamedali

Civil construction situation

Azerbaijan Railways has carried out the preliminary designs of cable installation on the whole section in Azerbaijan territory. The design document was presented in the meeting. Next step will be for the Contractor to conduct the site survey, and to review and provide guidance to the Railways to finalize the civil works design. The railways representative stated that they will provide a locomotive and wagon to the Contractor for the site survey work.

3. Contractor's work plan

Contractor's preliminary work plan was introduced in the meeting. The final time schedule and work plan will be prepared by the contractor and agreed with the recipient and supervisor during the first month of contract.

4. Responsibilities of parties in the implementation

It was noted that the supply of cables, pipe, equipment and system as well as the installation and collection of the system will be the responsibility of the contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Azerbaijan Railways. The role of the supervisor will be to monitor project progress, witness testing jointly with the Railways, and provide certificates for partial and final acceptance.

5. Time schedule of works

The following main steps were noted from the preliminary time schedule:

- Site survey will be carried out during months 2-4
- Civil engineering designs will be reviewed and completed by the end of month 5
- High level design document will be completed by the end of month 5
- Optical Cables and tubes will be delivered to Azerbaijan by the end of month 14
- Installation of the cable by the Azerbaijan Railways should be carried out during months 15-20
- Delivery and installation of equipment will be carried out during months 15-20
- Final testing and approval of Azerbaijan subsystem month 21

Comments of Azerbaijan Railways

By Azerbaijan Railways the following amendments are proposed:

- Site survey will be carried out during months 2-3
- Civil engineering designs will be reviewed and completed by the end of month 6
- High level design document will be completed by the end of month 4
- Optical cables and tubes will be delivered to Azerbaijan by the end of month 10
- Installation of the cable by the Azerbaijan Railways and Contractor hired by Azerbaijan Railways should be carried out during months 10-17
- Delivery and installation of equipment will be carried out during months 15-20
- Final testing and approval of Azerbaijan subsystem month 21

6. Testing and approval programme

It was agreed that the Contractor and Consultant will agree on the testing and approval programme after the Contractor has prepared the final work programme and time



7. Introduction of Contractor's QA system

The contractor noted to carry out quality assurance in accordance with their ISO 9000 certified quality assurance system.

8. Other matters

It was confirmed by the Azerbaijan Railways that money for the civil works will be allocated on time for the works to proceed according to the agreed time schedule.

Signed in Azerbaijan on May 22, 2000

For Azerbaijan Railways



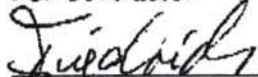
Mr Musa Panahov
Deputy Chief of Railways

For European Commission



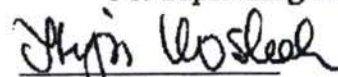
Raimo Niemi
Task Manager

For Contractor



Mr Heiko Friedrich
Project Manager

For Supervising Consultant



Ms Irja Koskela
Principal Supervisor

SUPPLY OF AN OPTICAL CABLE FOR COMMUNICATION AND SIGNALLING TO THE RAILWAYS OF GEORGIA, ARMENIA AND AZERBAIJAN

PROJECT START-UP MEETING IN TBILISI, GEORGIA 23..5. 2000

MINUTES OF THE MEETING

Participants:

Georgian Railways:	Mr Chkhaidze Mr Melkadze Mr Kuchava
Contractor (Siemens):	Mr Friedrich Ms Konigs Mr Beelen Mr Ellrich
Supervisor (Finnroad):	Mr Mannonen Ms Koskela Mr Chantladze
Traceca Coordination Team:	Mr Turdzeladze

1. Opening and introductions

The purpose and agenda of the meeting was discussed and approved. The parties of the project were introduced. After the introductory meeting with the Director of Railways of Georgia, the technical meeting was continued in Mr Melkadze's office.

2. Present status of project

Project Coordination Team

It was agreed that each party will nominate one coordinator for the project. The Coordinators are:

- Georgian Railways, Mr Melkadze
- Contractor, Mr Friedrich
- Supervising Consultant, Ms Koskela

The role of the Coordination Team will be to keep all parties fully informed of project status and progress, to identify potential problems at an early stage as well as find solutions to the problems.

In addition it was noted that the TRACECA programme coordinators in Caucasus will provide assistance and advise during the implementation of the project and may attend the coordination meetings.

Contractual Situation

The contract between EC and the Contractor has been signed on May 16, 2000. The contract between EC and the Supervising Consultant has been signed on May 6, 2000.

Civil Works Situation

Georgian Railways has carried out the designs of cable installation on the whole section in Georgian territory, except for the section between Santredia and Supsa, which was added to the contract during negotiation stage. Design of that section will take about one month. The other design documents were presented in the meeting. Next step will be for the Contractor to conduct site survey, and to review and provide comments to the Railways on the civil works design. The Railways representative stated that they are ready to start with the civil works for the cabling immediately after receiving the installation pipe. The reconstruction of the technical rooms are already underway.

3. Contractor's work plan

Contractor's preliminary work plan was introduced in the meeting. The final time schedule and work plan will be prepared by the contractor and agreed with the recipient and supervisor during the first month of contract.

4. Responsibilities of parties in the implementation

It was noted that the supply of cables, pipe, equipment and system as well as the installation and connection of the system will be the responsibility of the contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Georgian railways. The role of the supervisor will be to monitor project progress, witness testing jointly with the Railways, and provide certificates for partial and final acceptance.

5. Time schedule of works

The following main steps were noted from the preliminary time schedule:

- Site survey will be carried out during months 2-4
- Civil engineering designs will be reviewed and completed by the end of month 5
- High level design document will be completed by the end of month 5
- Optical Cables and tubes will be delivered to Georgia by the end of month 9
- Installation of the cable by the Georgian Railways should be carried out during months 10-15
- Delivery and installation of equipment will be carried out during months 10-15
- Final testing and approval of Georgian subsystem month 16.

Georgian Railways would like to speed up construction works from the presented schedule and requested the contractor to study possibilities of supplying part of the pipe (approximately 100 km) as soon as possible. Railways also pointed out that in the mountainous section of the line the civil works have to be discontinued during the winter season (approximately from November till March).

6. Testing and approval programme and final time schedule

It was agreed that the Contractor and Consultant will agree on the testing and approval programme after the Contractor has prepared the final work programme and time schedule for the project.

After that the final time schedule and work programme for the whole project, including testing and approval schedule, will be presented to the railways and agreed together by the Railways, supplier and supervisor.

7. Introduction of Contractor's QA system

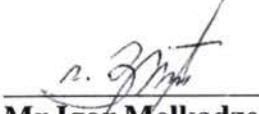
The contractor noted to carry out quality assurance in accordance with their ISO 9000 certified quality assurance system.

8. Other matters

The Railways will provide office space in their premises to the consultant if necessary.

Signed in Georgia on May 23, 2000

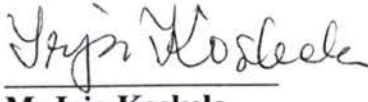
For Georgian Railways


Mr Igor Melkadze
Deputy Chairman of Railways, Chief Engineer

For Contractor


Mr Heiko Friedrich
Project Manager

For Supervising Consultant


Ms Irja Koskela
Principal Supervisor

**SUPPLY OF AN OPTICAL CABLE FOR COMMUNICATION AND SIGNALING TO
THE RAILWAYS OF GEORGIA, ARMENIA AND AZERBAIJAN**

PROJECT START-UP MEETING IN YEREVAN, ARMENIA 24.5. 2000

MINUTES OF THE MEETING

Participants:

Armenian Railways:	Mr Beglaryan, First Deputy Minister of Transport Mr Hrimyan Mr Barseghyan Mr Karaghezyan
Contractor (Siemens):	Mr Friedrich Ms Konigs Mr Beelen Mr Khachatryan Mr Demirkhanyan
Supervisor (Finnroad):	Mr Mannonen Ms Koskela Mr Manukyan

1. Opening and introductions

The purpose and agenda of the meeting was discussed and approved. The parties of the project were introduced. After the introductory meeting in the Ministry of Transport and Communication with the First Deputy Minister of Transport of Armenia, the technical meeting was continued in the Railways Department.

2. Present status of project

Project Coordination Team

It was agreed that each party will nominate one coordinator for the project. The Coordinators are:

- Armenian Railways, Mr Barseghyan
- Contractor, Mr Friedrich
- Supervising Consultant, Ms Koskela

The role of the Coordination Team will be to keep all parties fully informed of project status and progress, to identify potential problems at an early stage as well as find solutions to the problems.

The Contractor will nominate a local representative for the project. Consultant's local representative is Mr Manukyan.

It was noted that the TRACECA programme coordinators in Caucasus will provide assistance and advise during the implementation of the project and may attend the coordination meetings.

Contractual Situation

The contract between EC and the Contractor has been signed on May 16, 2000. The contract between EC and the Supervising Consultant has been signed on May 6, 2000.

Civil Works Situation

Armenian Railways have not started the designs of cable installation. Financing of the designs is now available and the selection of designer will be done shortly. Design of the civil works will be completed around 1.10.2000. Simultaneously the Contractor will conduct site survey, and will review and provide comments to the Railways on the civil works design.

3. Contractor's work plan

Contractor's preliminary work plan was introduced in the meeting. The final time schedule and work plan will be prepared by the contractor and agreed with the recipient and supervisor during the first month of contract. According to the preliminary schedule the installation of cable and equipment will start in month 13. Thus the rehabilitation and facilitation of the technical rooms shall be completed by then.

4. Responsibilities of parties in the implementation

It was noted that the supply of cables, pipe, equipment and system as well as the installation and connection of the system will be the responsibility of the contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms will be carried out by the Armenian railways. The role of the supervisor will be to monitor project progress, witness testing jointly with the Railways, and provide certificates for partial and final acceptance.

Armenian Railways stated that civil works will be carried out by their own staff except for a 60 km section in the mountains which will be done by a sub-contractor. They further pointed out that the Railways don't have suitable equipment for cable blowing, and that such equipment has earlier been requested from the European Commission to be included in the contract. The Contractor informed that the supply of cable blowing equipment is not included in their contract, and agreed to send a copy of the document confirming that to the Armenian Railways. The contractor further agreed to provide contacts of interested cable installation contractor(s) to the Railways.

The Consultant pointed out that the EU budget for the Optical Cables project is fully committed and does not allow for additional equipment procurement.

5. Time schedule of works

The following main steps were noted from the preliminary time schedule:

- Site survey will be carried out during months 2-4
- Civil engineering designs will be reviewed and completed by the end of month 5
- High level design document will be completed by the end of month 5
- Optical Cables and tubes will be delivered to Armenia by the end of month 12
- Installation of the cable by the Armenian Railways should be carried out during months 13-17
- Delivery and installation of equipment will be carried out during months 13-17
- Final testing and approval of Armenian subsystem month 18.

6. Testing and approval programme and final time schedule

The Contractor and Consultant will agree on the testing and approval programme after the Contractor has prepared the final work programme and time schedule for the project.


After that the final time schedule and work programme for the whole project, including testing and approval schedule, will be presented to the Railways and agreed together by the Railways, Contractor and Consultant.

7. Introduction of Contractor's QA system

The contractor noted to carry out quality assurance in accordance with their ISO 9000 certified quality assurance system.

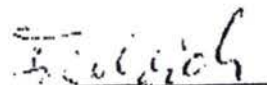
Signed in Armenia on May 24, 2000

For Armenian Railways



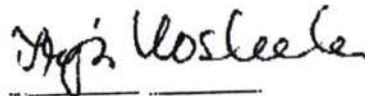
M Ararat Hrimyan
Head of Railways Department

For Contractor



Mr Heiko Friedrich
Project Manager

For Supervising Consultant



Ms Irja Koskela
Principal Supervisor