



**Supervision of Rehabilitation of  
Aktau Ferry Terminal  
Progress Report  
March - April 2001**

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**1.**

Date of report : April 30th , 2001  
Reporting period : March/April 2001  
Author of report : M.Sims

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## 1. Project Synopsis

### Project Objectives:

The principal objective of the services to be provided under this contract is to supervise the Aktau Ferry Terminal rehabilitation works through to completion:

- within the agreed time for construction
- at the agreed cost
- in accordance with the standards set out in the works contract documentation

### Planned Outputs:

Within the limits allowed by the supervisory role defined in the works contract:

- ensure that all structural defects are thoroughly identified and perfectly repaired;
- check correctness of design works performed by the Contractor;
- make sure that new structures, components and equipment are of required quality;
- follow up and check the results of all working tests;
- avoid any delay to the works;
- avoid any extra berth occupancy, over the allowed three-month period;
- enable fast decision in case the project has to be amended;
- control that no damage is caused to the environment;
- ensure that constructions comply with European Union and Kazakh regulations;
- prepare regular instalment documents;
- follow up and check the results of completion tests;
- prepare taking over certificates;
- make sure that the works are carried out within the contract price.

### Project Activities since start:

- project preparation
- mobilisation of Consultant's staff in Aktau
- commencement meetings with the contractor and port authorities
- arrangement of logistics (office, equipment, transport, accommodation)
- ongoing review of the work foreseen and contractor's activities

Project Starting Date ("Effective Date"): 15.9.2000

Project Duration: 10 months

## **2. Project Progress**

### **2.1 Activities by the Supervision Team**

The Resident Engineer (Mr.V.Rogachev) continued his presence on site throughout the reporting period. He inspects the works several times a day, and maintains a continual dialogue with the contractor's managers and foremen.

Site documentary records, including drawings, and certification of materials and equipment, are maintained in the supervisions team's office at the port. Reports, commentaries, minutes of meetings and other events are transmitted between the supervision team in Aktau, Brussels and Almaty, by means of email, several times a week.

Contacts with the port management and technical services are necessarily frequent. These concern, among other technical subjects, operation of the ferry terminal, connections of the new ferry terminal installations to utilities such as electricity, water and sewage lines, and approval of equipment eventually to be taken over by the port.

In general, progress with the works has much accelerated<sup>1</sup>. Principal problems faced by the team are slow, incomplete, or non-delivery of designs, specifications, and certifications that the contractor should supply to the Engineer for approval. In spite of this dialogue with the contractor remains constructive, and there is a willingness on all sides to push towards successfully completion of the project. The Resident Engineer provides daily urgings for the contractor to maintain progress.

The Resident Engineer has also actively intervened on issues of site safety, affecting workers and the Port services.

Non-resident members of the supervisory team visited site on the following occasions:

The EU Project Manager (M.Sims) was present on site from 15<sup>th</sup> April until 23<sup>rd</sup> April. Meetings with the Resident Engineer, Port Management, and the Contractor were held. The Contractor's General Manager, Mr.Efendi Ismiev was also present on site at that time. This is an indication that the Contractor has woken up to acknowledge the magnitude of the delays that have accumulated in the execution of the works. Principal subjects of discussion were:

1. Backlog of works, particularly on the ramp.
2. Slow delivery of documentation.
3. Additional works
4. Intermediate payments
5. Non-approved actions by the Contractor.
6. Claims of the Contractor against the RE

Brief minutes of the meetings are included in Protocol 11 in Annex 1. This annex also includes the minutes of a subsequent meeting concerning electrical installations.

The EU Mechanical Engineer (I.de Halleux) visited the site from 25<sup>th</sup> March until 31<sup>st</sup> March. His full mission report comprises Annex 2. The ramp had been partially dismantled at that time, and was more visible than on previous occasions. No unforeseen additional structural problems were apparent. Some additional electrical specifications and drawings were brought back to Brussels by the mechanical engineer, for scrutiny by the supervision team's electrical engineer. The electrical engineer's comments comprise Annex 3.

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The mechanical engineer arranged further certification from the EC Delegation in Almaty, to assist the Contractor in duty-free importation of equipment and materials for the project.

The contractor is preparing an interim certificate for payment. This is under discussion with the supervisory team, and the TACIS financial team.

## **2.2 Progress with the Works**

Progress with the works has much improved since the beginning of March. The ramp was closed to regular ferry traffic on the 10<sup>th</sup> March to allow the necessary dismantling for rehabilitation of the ramp structural elements. The old ramp was finally used by the ferry between 17<sup>th</sup> – 19<sup>th</sup> March, but this was only to deliver some urgently needed equipment for the Contractor. In fact the ferry continues to call on the port, in principal on a regular weekly basis. It moors stern-on to a general cargo quay in the main port, and uses an improvised ramp to load and off-load cargo.

The Contractor has confirmed that the ramp will be reopened for traffic on 10<sup>th</sup> June, in accordance with contractual obligations. He has furthermore confirmed that the whole of the works will be substantially complete by 20<sup>th</sup> June, which again would satisfy contractual obligations. As-built drawings and documentation are promised by 30<sup>th</sup> June.

The Contractor's General Manager is now present on site approximately 50% of the time, and actively engaged in the project's management. There are 70 people employed on the site. Most of the technical and skilled personnel are from the Contractor's own experienced staff from Baku.

A major part of the equipment and materials needed to complete the works are on site. Awaited are; paint topcoat, electrical motors, electrical cabling, hoist cabling. All of these items are expected to arrive in sufficient time to avoid any interference the project completion.

Practically all of the materials sent to site so far are subject to reservations on their conformity with the specifications. This is not to say that they are unacceptable, but the necessary design calculations, specifications, certifications and test results have not been submitted. The supervisory team's electrical engineer's report in Annex 3 is an example of the reservations expressed. The very hurried construction schedule which must be adhered to, to finish on time, is unfortunately conducive to poor quality workmanship, and negligent site safety.

On a positive note, the ramp sandblasting and painting dispositions taken by the contractor appear to be well planned, using good quality materials and trained personnel. This work on the ramp is a major component of the project, and if correctly carried out will lead to long-term protection of the structure..

In the opinion of the supervisory team it is possible for the works to be substantially completed on time.

The sandblasting of the ramp in place will be followed immediately, hour by hour, by the application of the paint prime coat. Simultaneously, dismantled elements of the ramp which are to be re-utilised, together with new structural elements, are being sandblasted and painted on shore. Re-assembly takes place immediately after the paint topcoats are conditioned. These processes are to be completed by the end of May. Other activities, in the lifting towers, and shore facilities, are to continue simultaneously.

No unforeseen physical site conditions have been revealed.

The weather has been typical for the season. It has not, and is not expected to pose any hindrance to the works.

The contractor's progress report is included as Annex 4

A set of site Photo's comprise Annex 5.

### **2.3 Project Planning**

The gloomy prognostics of the previous progress report, when progress was extremely slow, appear to have been avoided.

The electrical engineer will visit the site during the second half of the month of May.

According to the Contractor's engagements, it would be possible to carry out the completion tests during the second half of June.

While "substantial completion" may be achievable during the month of June, it is probable, even certain, that a significant list of supply and work items to be completed or rectified by the works Contractor will remain outstanding at that time. It is likewise very probable that the completion of this work will over-run the end date and resources of the present supervision contract.

For this reason the Consultant will propose an addendum to the present contract to allow for:

- Final specialist site inspections of work completed by local and EU staff.
- Approval of the final certificate for payment.

# **ANNEX 1**



**Rehabilitation of Aktau Ferry Terminal.  
Реконструкция паромного терминала.**

Meeting minutes №11

совещания №11

Протокол

17 апреля 2001  
Aktau.

На совещании присутствовали:

**АТМП**

**АСРР**

Главный инженер порта  
Chief Engineer of Port

В.Константинов  
V.Konstantinov.

Начальник строительного отдела  
Head of civil engineering department

Ю.Соловьев  
Y.Solovjev

Переводчик  
Interpreter

Н.Дауленова  
N.Daulenova.

*Технический контроль - компания ТРАКТЕБЕЛЬ  
Supervision – company TRACTEBEL*

Руководитель транспортных проектов  
Transport Projects Manager

М.Симс  
M.Sims

Постоянный представитель Инженера  
Resident Engineer

В.Рогачев  
V.Rogachov

**Подрядчик – АО AZERKORPU**

**Contractor – JSC AZERKORPU**

Председатель АО «AZERKORPU»  
The chairman of JSC " AZERKORPU»

Э. Исмиев  
E. Ismiev

Менеджер проекта  
Project Manager

Д. Орлов  
D.Orlov.

**Повестка:**

1. Отставание работ от графика.
2. Неудовлетворительное состояние проектной и исполнительной документации.
3. Дополнительные работы.
4. Промежуточный платеж.
5. Несанкционированные действия Подрядчика на строительной площадке.
6. Претензии, пожелания, просьбы Подрядчика в целях контракта.

**Agenda:**

1. Backlog of works from the Schedule.
2. Unsatisfactory condition of the design and executive documentation.
3. Additional works.
4. Intermediate payment.
5. Non-authorized actions of the Contractor on site.
6. Claims, requests of the Contractor relating to the contract work.

**Принятые решения по проблемам:**

1.1 Господин Э.Исмиев заверил что:

- a. В настоящий момент численность рабочих достаточна для завершения работ по контракту (70 человек);
- b. Недостающее оборудование, материалы будут доставлены на строительную площадку до 15.05.01. Подрядчик пока не смог оплатить поставщикам за автобус, компьютеры, рентгено-сканеры. Он рассчитывает заказать их после получения промежуточного платежа.
- c. Работы по ремонту рампы будут завершены 10.06.01. Все работы будут завершены к 20.06.01. Возможно, будет допущена задержка работ по покраске шпунтовых свай до 30.06.01, из-за задержки поставки материала от производителя. Исполнительные чертежи и вся документация будет выпущена до 30.06.01.

- 1.2 Работы, которые будут выполняться после 10.06.01 не должны создавать помехи для нормального функционирования паромного терминала. Использование терминала портом до этой даты возможно в качестве проверки, но работа не будет принята ни частично ни полностью до этой даты. Подрядчик должен предоставить до 27 апреля детальный график испытаний на готовность рампы, к тому времени, когда все документы, включая исполнительные чертежи, будут предоставлены.
2. Дополнительный штат Подрядчика будет назначен для подготовки документов и приведения в порядок запущенных документов делопроизводства.
3. Необходимые документы по дополнительным работам подписаны Подрядчиком и ЕК. Копии этих документов должны быть предоставлены в Порт и Инженеру.
4. Подрядчику следует оформить заявку на промежуточный платеж в соответствии с «Условиями Контракта», п.14.3.
5. Господин Э.Исмиев заверил, что случаи несанкционированных действий не повторятся.
6. Представитель Инженера в каждом случае будет индивидуально оценивать необходимость оформления документов для того, чтобы не допустить снижения качества работ и избежать задержки работ из-за оформления документов.

#### **Practical conclusions:**

- 1.1 Mister Э.Исмиев has assured that:
  - a. at the moment the number of the workers is sufficient for end of works under the contract (70 employees);
  - b. the missing equipment, materials will be delivered to site by 15.05.01. The contractor could not pay to the suppliers for the bus, computers, x-ray scanners. He expects to order these items after receiving an interim payment.
  - c. the works on repair of the ramp will be completed on 10.06.01. All the works will be completed by 20.06.01. For the reason of delay in delivery of material by the manufacturer, the work on painting sheet piles maybe will be delayed by 30.04.01. All documentations including executive drawings will be issued by 30.06.01.
- 1.2 Works, which will be carried out after 10.06.01 should not create any obstacles for operation of the ferry terminal. Use of the terminal by the Port will be possible as a trial operation, and will not constitute acceptance of the work as a section or as a whole. The Contractor should provide by 27<sup>th</sup> April a detailed schedule for Completion Tests on the ramp, at the time of which all documentation including as-built drawings should have been presented.
2. Additional Contractor's staff will be appointed to prepare documentation and clear up the backlog.
3. The necessary addendum documentation has been arranged between the Contractor and the EC. Copies are to be provided to the Port and to Engineer.

4. The contractor should issue the application for intermediate payment according to " Conditions of the Contract ", item 14.3.
5. Mister E.Ismiev has assured that, the cases of the non-authorized actions will not be repeated.
6. The representative of the Engineer in each case will estimate individually necessity of registration of the documents to not admit decrease of quality of works and to avoid a delay of works because of registration of the documents.

**АТМП**

*ACSP*

Главный инженер порта  
В.Константинов.

Chief Engineer of Port  
V.Konstantinov.

**Компания ТРАКТЕБЕЛЬ**

**Company TRACTEBEL**

Постоянный представитель Инженера  
Resident Engineer  
V.Rogachov

В.Рогачев

**Подрядчик – АО AZERKORPU**

**Contractor – JSC AZERKORPU**

Менеджер проекта  
Project Manager

Д.Орлов  
D.Orlov.

**Rehabilitation of Aktau Ferry Terminal.  
Реконструкция паромного терминала.**

Meeting minutes №12

совещания №12

Протокол

25 апреля 2001 г.  
Aktau.

**В совещании по теме «Электроснабжение и электроосвещение» приняли участие:**

**In meeting on a theme " Electric supply and electric lighting" have taken part:**

**АТМП**

**АСРР**

Главный энергетик порта  
Сушков Е. Н.

Head Power Engineering Specialist  
Sushkov E. N.

Инженер отдела главного энергетика  
Генералов В.П.

Engineer of department of Head Power Engineering Specialist  
Generalov V.P.

*Технический контроль - компания ТРАКТЕБЕЛЬ и Каздорпроект  
Supervision – company TRACTEBEL and Kazdorproject*

Постоянный представитель Инженера  
Рогачев В.В.

Resident Engineer  
Rogachov V.V.

**Подрядчик – АО AZERKORPU**

**Contractor – JSC AZERKORPU**

Инженер электрик  
Сабир-оглы Наджафов Джабир  
Electric Engineer

Менеджер проекта  
Орлов Д.С.  
Project Manager D.S. Orlov.

**Повестка:**

1. Тип новой трансформаторной подстанции.
2. Замечания ко второму изданию проекта «Электроснабжение и электроосвещение».
3. Возможность сохранения старых мачт освещения.
4. Металлоконструкции мачт освещения.
5. Специальное оборудование.
6. Согласование с государственными органами.

**Agenda:**

1. Type of new transformer substation.
2. Remark to the second issue of the project " Electric supply and electric lighting ".
3. Opportunity of preservation of old lighting masts.
4. Steelworks of lighting masts.
5. Special equipment.
6. Coordination with state bodies.

**Принятые решения:**

1. Предложенный тип трансформаторной подстанции (КТПН-2Х400 квт) удовлетворяет требованиям СНиП и местным условиям эксплуатации.
2. Замечания ко второму изданию данного проекта будут учтены при подготовке исполнительной документации.
3. Старые осветительные мачты будут сохранены. При этом надежность конструкции мачт будет увеличена строительными способами. Подрядчик в ближайшее время должен предоставить Представителю Инженера свои предложения.
4. Все металлоконструкции (ограждения, лестницы, кабельные каналы) будут отремонтированы.
5. Специальное оборудование применяется в соответствии с проектом.
6. Подрядчик должен получить обязательное согласование государственной контролирующей энергетической компании «Энергонадзор» до 10.05.01.

**Practical conclusions:**

1. The offered type of transformer substation (КТПН-2Х400 kw) meets the requirements SNiP and local conditions of operation.
2. The remarks to the second issue of the project will be taken into account by preparation of the executive documentation.
3. The old lighting masts will be preserved at increase of reliability of masts by construction methods. The contractor in a near future should give to Resident Engineer the offers.
4. All steelworks (protection, ladder, the cable channels) will be repaired.

5. The special equipment is applied according to the project.
6. The contractor should receive the obligatory agreement of the state supervising power company "Energonadzor" by 10.05.01.

**АТМП**

**АСРР**

Главный энергетик порта Сушков	E. N.
Head Power Engineering Specialist Sushkov	E. N.

*Технический контроль - компания ТРАКТЕБЕЛЬ и Каздорпроект  
Supervision – company TRACTEBEL and Kazdorproject*

Постоянный представитель Инженера Resident Engineer V.Rogachov	V.Rogachov
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**Подрядчик – АО AZERKORPU**

**Contractor – JSC AZERKORPU**

Менеджер проекта Project Manager	Д.Орлов D.Orlov.
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## **ANNEX 2**



# Mission Report.

ALMATY-AKTAU from 25 to 31 March 2001

Persons met during our stay

In Almaty: Mr Yuri KOMOV from KASDORPROJECT  
MissAlia BAIDEBEKOVA from EUROPEAN UNION

In AKTAU: Port Authority Mr GLOCK  
Mr KONSTANTINOV  
Miss Nur JALIMA whose assistance as translator  
has been highly appreciated.

Contractor AZERKORPU, Mr V. ORLOV  
Mr M.SIMIEV  
Resident Engineer Mr V. ROGACHOV

Duration of the mission in AKTAU 27 to 29 th of March 2001

Situation on site

## **1. Civil Works**

### **1.1 Parking for trucks and trailers:**

Subsoil has been flattened and compacted.

Crushed stones for foundation are partially laid  
and should be equalised and compacted.

### **1.2 Towers and Control Room**

For all four towers with hoisting mechanisms the  
outside walls are rebuild and coated with cement outside 100 % and inside  
80% and roofs repaired. Roofing to be placed..

The pits for the counterweights have been emptied  
but at time of our visit water was againn raisen at different levels depending  
on the pit. The worse is trunk 2.2, Right side waterside where water level is as  
height as 60 cm from the top of the counterweight. Minimum 3 meter depth.  
Since the position of the counterweight is close to the lower limit, access at  
the bottom of these pits is only possible after repair of the spans and  
electrical connection of the hoist/lowering winches and screw lifting devices.

Inside of the pits must be checked for leakage. A proper control of these is only possible after removing of the existing steel plate construction which is completely corroded. Damage to concrete is to be repaired with adequate concrete.

The bottom of each pit should be examined when the counter-weights could be lifted allowing access to the bottom. The sealing could be performed by injection if the leakage is not acceptable.

The control room is being painted inside. Access stairs are placed. Most of the windows repaired but not renewed. Some window panes to be renewed. Roof is repaired. Roofing has still to be placed.

### **1.3.Finger Pier**

A new concrete floor, not reinforced, 20 cm thickness has been placed during our visit.

### **1.4 Fendering**

All second hand tyres to be used as fenders are on site. The steel crosses for fastening of these tyres are under construction and are already painted with suspension chains. The chains and the crosses are not galvanised. as described in the specs B11. All fenders are made by assembling only two tyres. Nevertheless it is specified to use three. (B11).The existing wooden fendering is not yet removed.

## **2. Mechanical works**

At the time of our visit all gearboxes were emptied and gears cleaned. All roller bearings of the counterweight pulleys are cleaned and new grease used.

The wire grease in the pulley groves, hardened by the years, will be removed when the compensating wires will be replaced.

The grease on the trapezoidal lifting worm screw has been removed. No damage nor rust has been observed. It is recommended, before applying new grease to make the right choice of grease quality and to clean the screw with White Spirit or similar solvent. Plastic protection against dust and water is placed until the protection pipes will be fabricated and fitted.

Inside all gearboxes no wear could be identified.

Remnants of gear oil to be wiped off before refilling.

Brake linings are in good condition. Most certainly the brake linings are made of asbestos fibres which is no more allowed in the European Standards. Read further in this report. Nothing has been specified in the specs.

## **3. Electrical works**

All electrical boxes in the control room and in the towers are removed for scrap.

All electrical cables and electrical accessories such as switches, electrical wall plugs etc, have been removed. None new replaced. The cables crossing the ramp are not yet removed. The cable trays and pipes are in bad condition and should be replaced.

Electrical control of the insulation characteristics of the motors is being done in accordance with the Port's electricians. A certificate for each motor will be issued. Certificates to be collected **if the motors will be reused**.

New cables are not yet delivered on site.

Nothing is done for the new transformers substation. The transformers are ready for shipment. Some customs problems arose but yet settled. Read further.

#### **4. Construction works on the spans**

The dismantling of the whole deck construction of the spans is going on. Wood beams, rails, deck plates, rail switches and their command systems are being removed. End of these works is estimated mid week 14.

The hinges of the spans are opened for inspection. Only the upper part of the carrying axles could be seen. They are seemingly hard chromed. They were not corroded at all. After grit blasting and painting, special attention should be paid to the regreasing of these hinges. Before replacing the pivots, the necessary modifications to the construction of the hinges should be done in order to provide **the adequate lubricator devices** as specified C5 and C6. The Contractor has to submit the necessary drawing for this improvement. Complete cleaning of the bronze lining before lowering the spans in their recess is required.

The fixing of the deck construction on the main structure of the spans must be discussed with the Engineer. Welding these elements on the structure is not the best way to do. We prefer fixing with bolt and secured nuts. Some stop-blocks should be welded on the structure in order to reduce the shear forces on the bolts.

#### **5. Delivery of materials on site**

At the time of our visit we saw only the necessary steel plates and reinforcement girders in steel profiles to make on site the new deck plates and all the second hand tyres for fenders. The calculations of the deck construction were submitted to the resident engineer for approval. On the drawing the anti slip coating specified is not foreseen as per specifications but instead welded steel bars are proposed.

The fixing of the deck construction on the main structure of the spans must be discussed with the Engineer. Welding together these deck elements with the structure of the spans is surely not the best way. We prefer to fix these deck constructions with bolt and secured nuts.

The 29th, of March, Mr ISMIEV came with the approved list of foreign supplies necessary for the completion of the contract. The Customs asked a separate certificate from the E.U. in order to allow free import of these materials. We arranged the certificate with Alia BAIDEBEKOVA from the E.U. office in Almaty on Friday and sent it to AKTAU immediately. Copy of this certificate is joined in annex to this report

The rocks for shore protection on the central pier are on site but not yet placed.

## **6. Gritblasting and painting**

These works are planned to start end of the week 14, as soon as the existing deck has been removed. The Contractor ordered the paint and payment will also be done week 14. The paint will be delivered by in Almaty within 10 days after payment.. Agreement is made between the paint supplier, HEMPEL of Germany and AZERKORPU, to have a quality control during the painting works in order to ascertain that the required 5 years warranty could be obtained with certificates..

## **7. Various**

We went with Mr ROGACHOV and ORLOV under the spans in order to make a suvey of the current conditions of the steelwork.

We observed that the main girders are not in too bad condition in relation with the age of the construction and the lack of any maintenance during the 30 year of live of the structure. Mostly the lower parts are deply corroded. Also the connection with the cross members, smaller profiles and brackets are corroded and need special attention after chipping of the rusted places and sand blasting ( grit blasting ) of the whole spans. Too hardly corroded parts to be rewelded or replaced. A daily control of the gritblasted parts to be done by the resident engineer. Any remarks concerning excess damage to the main structure and cross members to be mentioned to the Contractor and necessary repairs performed.

The contractor is going to build special pontoons to allow access to the whole of the spans. The pontoons will be equipped with dust collecting tarpaulins to avoid as much as possible the water pollution by the used grit and paint and corroded steel particles.

The spans will not be removed completely but will be jacked up the necessary height at the land side to allow for access at the lowest parts of the main beams currently under water level. At the same time the pivot bearings to be inspected as described under point 4 above.

## **8. COMMENTS**

- 1 Weight of the new deck compared with the existing one. Calculations. Control of the total weight in the hoist wires during installation of the deck plating.
- 2 Grit blasting and painting programme
- 3 Installation of the electrical cables
- 4 Installation of the electrical components in the control room. Quality of boxes.
- 5 Watertightness of the pits.
- 6 Preparation of extra counterweight if necessary.
- 7 Improvement of the brakes of the hoisting winches in the outer towers.
- 8 Repair of quaywalls on finger- and central piers.
- 9 Repair of access road at the foot of the ramp between the access rail tracks.
- 10 Sequence of electric wiring installation
- 11 Electrical and mechanical tests.
- 12 Oil choice for mechanisms.
- 13 Painting of new structures and steelwork.
- 14 Quality control of delivered materials such as concrete, steel certificates, steel wires used, control and survey of the gritblasting and painting operations.
- 15 Safety markings and traffic lights ?
- 16 Anti slip coating of gangway besides the access ramp for personel and truck and cars driving lane.
- 17 Safety mesures during gritblasting and painting.
- 18 Delivery of electrical cables
- 19 Electrical substation .
- 20 New planning of works

### **8.1. Weight of the ramp.**

The Contractor has to demonstrate by accurate calculations that the total weight of the waterside span has not changed against the original weight. The replacement of the wooden deck by a steel construction could influence the weight in the lifting winches.

We saw that on top of the counterweight about 500 Kg of steel ballast had been added. This small weight difference of only 5% of the lifting capacity of the winch demonstrates the necessity of the weight balance between bridge and counterweights.

The calculations should be presented to the Engineer at least two weeks before the start of the preliminary trials. Before these trials, the bridge weight should be measured in order to avoid any overload of the winches which may cause important break downs during these trials and perhaps delay the commissioning of the Ferry ramp.

On the other side, provision should be made to provide the necessary space to add extra ballast on the counterweights or on the bridge even if not foreseen in the technical specifications (C12).

## **8.2. Gritblasting and painting schedule and works. E.4. C.7 and C.8.**

These operations should be performed before any other reconstruction of the bridge deck can be started. Therefore we want to recommend to start as soon as possible with the chipping by means of chipping hammers manual or, preferably, pneumatic. Heavy rust must be removed before any gritblasting can start and to perform both operations together can become a health and safety problem for labor forces.

When gritblasting begins, each day after accurate removal of dust, the primer coat should be applied and the time between two coats should be as recommended by the paint supplier under whose responsibility and survey the operations will be performed. We recommend also to verify if the right solvents are used and if the pot-life of the paint used is not exceeded.

The Contractor should prepare and submit to the Engineer the planning of these works, taking in account the fact that during these operations, other activities on the spans will be difficult, very difficult if not impossible.

The surveyor of HEMPEL who is in charge to follow closely the painting works should present himself to the resident engineer each day He is present on site. These days will be recorded in the Log-book of the project.

All mechanical parts and reused electrical motors, if any, which can be damaged by abrasive dust and grit, must be conveniently protected or removed from the site.

Before refilling oil in the reduction gears; each gearbox must be examined once again, for clean-ness.

The Contractor is intended to build on site all deckplates with steel stiffeners. He is not intended to have these parts protected by hot dip galvanisation as described in item C12

## **8.3. Installation of Electrical cables.**

After installation of the transformers in the substation, the main supply cables should be placed in the channels alongside the access road to Central Pier. Position of the underground cables under the access rails and access road must be clearly indicated. The position of these cables will be shown on the "as build" drawings.

We don't know if the local railway regulations requires to place the electrical cables crossing the railspurs in a steel pipe as it is common in Belgium. To be checked.

#### **8.4. Installation of the electrical components in the Control Room. E8 and E9.**

The installation of the complete Control Room should start as soon as possible in order to be ready at the time the paint works are completed and the wiring through the spans to each of the 4 towers can take place.

Special care should be paid to the installation of cable trays under the spans. Existing ones are in bad condition. All damaged paint by welding the cable tray or duct, should be cleaned and repainted with the complete paint scheme: Primer and two coats. Preferably these trays should be positioned and welded to the span's structure before painting. The trays to be provided in galvanised steel or in synthetic U.V.-resistant material.

#### **8.5. The watertightness of the pits. E 3 and E.4.**

We observed during our visit that the pits are not watertight. Water level was different in each pit. The contractor, as mentioned by himself, emptied all four pits by start of the project.

The speed at which the water level in each pit increases, must be recorded week per week in order to know the necessary delivery of the pumps to guaranty the pits could be maintained dry during the operations of the ferry terminal. We have to remember that the water displacement of the counterweight is approximately 10 Ton per m which is the full capacity of the hoisting winches in the outer towers.

Presently, since the spans are in high position, there is no possibility to have a complete inspection of each pit. It is also impossible to perform any improvement to the watertightness. This should be done when the bridge is in operation.

Nevertheless, at this time, existing steel plating covering the walls in the pits, probably former shuttering of pit construction, completely corroded and useless, must be removed in order to make the inspection of the upper part of the pits and perform necessary resealings most probably just above the construction in sheet pile E13 and E14. The lower parts and cleaning of dirt and debris from the pits bottom shall be done at a later stage when access becomes possible.

The Contractor should provide a description of the sealing method he wants to utilise. E.4.

#### **8.6. Preparation of extra counterweight if necessary.**

The Contractor should hold on site all rests of steel to be used as extra ballast if necessary as explained in 8.1. There is no provision made for any additional counterweight under C12.

### **8.7. Alteration of the brakes of the hoisting winches in outer towers.**

This alteration is a system to allow to lower the spans safely when an electrical trouble appears. There is a question about the necessity to remove the existing brake lining and to replace it by a lining without asbestos as per european standards. Nothing is described in the specifications.

We recommend to take care to avoid any unattended movement of the ramp during these improvement works to the hoist brakes.

### **8.8. Repair of quaywalls on central- and finger piers.B.5 and B.6.**

The Contractor should advise the Engineer when he is intended to start the repair works on the quaywall by projection of concrete components. It can be seen on some photographs that the existing capping is loose on many places close to the sea water level. A thoroughly inspection of all loose parts must be performed by the resident Engineer and the results recorded on drawings.

### **8.9. Repair of access road. H.4 and H.5.**

The access road to the ferry ramp is in bad condition in, and in between, the two access rail spurs.

Since most of the road traffic to and from the ramp will pass on these spurs and take a turn, it is recommended to have this part repaved as is done in different places in the port pavement.

This work seems not provided in the specifications under H4 &H5.  
Supplementary work?

### **8.10. Sequence of electric wiring installation.**

Due to the necessary time required to install all new electric boxes and wiring it is important that the Contractor demonstrates that the electrical wiring can be performed in the time left for completion of the project taking in account the painting activities. A separate planning for these works should be supplied to the Engineer before the end of April.

### **8.11.Electrical and mechanical tests**

These should be mentioned in the planning required under point 8.10.

The tests required for commissioning of the ramp as described in item A.4, will be submitted to the Engineer for approval. A complete test programme shall be issued and will be discussed with the ACSP staff and the Engineer. It must be planned with the owner of the Ferry Mercuri 2.

### **8.12. Choise of oil quality for gears.**



It has been agreed with ACSP technical staff to use SHELL quality oils with the same characteristics as the oils used in the cranes. This for standardisation reasons at Port's level.

### **8.13. Painting of new structures and steelwork.**

All new steel used in the project, such as deck plates, stairs, doors, railings etc, shall be painted when non otherwise foreseen in the specs, as specified by the supplier of the paint for the main structural parts of the ramp D.2.

### **8.14 Quality Control for materials delivered on site and works.**

The Resident Engineer shall require all certificates of origin and quality of the materials and components used in this project. more specially, the quality of concrete delivered, the quantity of cement used in the mortar prepared on site, steel plates and profiles certificates, wires etc.

### **8.15 Safety markings, and traffic lights for RO-RO operations..**

No drawing nor proposal has been made at this time.

### **8.16 Items F Works on the railway side.**

The works on the railway side of the project are not yet started besides some improvements in the railway Control room where the second floor is emptied. Some dismantling works are being made to the servo motors for the rail switches. The building number 3 will not be demolished.

### **8.17 Anti-slip coating for the footpaths on both sides of the ramp for operations personnel.**

This should be decided during next meeting.

### **8.18 Safety and health measures during the gritblasting operations.**

The Contractor should take the necessary measures to allow other activities to be performed safely during the gritblasting. If not, delay in completion of some works will be noted.

### **8.19 New electrical substation**

The description of the new substation have been received from the Contractor and handed over to the Electrical Expert, Mr Geert Wambacq. The Contractor proposes a fully installed steel or aluminium construction of the tranformer station to be placed on a concrete foundation. Level of the foundation to be checked with the risks of flooding of the site.

Annex to this report: Photographs.

## **ANNEX 3**

## **REHABILITATION OF AKTAU FERRY TERMINAL**

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**Date of the report :** April 06, 2001  
**Tractebel Electric Engineer:** Geert Wambacq

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Following remarks concern the "Explanatory Report" documents (without reference) that are received during the site inspection of the mechanical engineer in week 13/2001.

*Remarks ( most of them already mentioned in the site visit report )*

- Major network characteristics such as short circuit capacity, min and maximum voltage, etc. must be mentioned and taken into account during calculation of cable sections, protection devices and specification of switchboard characteristics.
- It is not clear whether the substation TP Nr. 803 will also supply power on the 6 kV level to other consumers than the 2 transformers 400kVA. The calculation of the section of the feeding cables 2 x 185 mm<sup>2</sup> Cu has to take other consumers into account.
- The working design documents have to be corrected, taking into account the references between corresponding drawings and equipment lists, technical corrections,
  - It is impossible to check the completeness of the consumer list since precise drawings of all feeder panels are not included and there is no correspondence of the equipment names, etc. The calculation of electric loads is not based on a consumer list but on a general description of consumer groups.
  - The equipment list includes more cables than the cable list.
  - Not mentioned on the equipment list :
    - КП1-4
    - Low voltage panels
    - 6kV panel
    - etc
  - On all documents the same names have to be used. For example, the names indicated on the "List of drawings" must be identical than the names on the drawing itself.

- ❑ The Inv. N° that is mentioned in the list of drawings must also be mentioned on all schemes as a unique identification.
  - ❑ Page numbering and drawing title blocs have to be filled out correctly.
  - ❑ kV = kilo Volts (tension level)  
kW = kilo Watts (active power consumption)
  - ❑ There is only one signature on the documents. They should be checked and approved by a second person.
  - ❑ Which of both equipment lists 65592 or 65596 is complete and valid. How are they complementary, or does one of these lists prevail the other ?
- A technical specification, drawings, notes, etc. regarding the control system are not included.
  - The new transformer station should not be of the outside type but must be installed in a closed substation.

The panels shown on the photos do not seem to be of sufficient IP grade to be installed outside.

The contractor's proposal for construction of a substation building or shelter is not included. This was discussed during our site inspection, February 7-8, 2001.

- Detailed drawings must be included or completed for
  - the 6kV switchboard and the low voltage switchboard layout
  - the installation details for cable entry in the transformer station
- Description and drawings for renewing of the lightning protection must be included.
- Installation drawings for the renewing of the earth protection must be included.
- Calculation notes, specifications or justification must be provided, showing that 3 lux will be available with the proposed lights.

- Cables that are installed in trenches have to be protected when entering or exiting from the ground by sleeves. Cables must be installed on a sand bed, in one layer and separated with approximately 20 mm space between each other to avoid overheating.  
They must be covered by sand (approx. 150 mm). Over this sand layer concrete tiles have to be placed to provide mechanical protection and early warning of the presence of cables.  
Markers must indicate Cable trenches.
- Technical characteristics and a technical documentation must be included for the main equipment (6kV switchgear, transformers, Low voltage panels, motors, lighting fixtures)

### ***Installation philosophy***

- It must be mentioned that the maximal active power consumption of 479 kW cannot be provided by a single 400 kVA transformer. This might cause problems when one transformer should be out of order or maintenance has to be provided. Therefore it is recommended in this case to install 2 transformers of 630 kVA each
- No emergency power supply is provided.

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## **ANNEX 4**

**Актауский Торговый Морской Порт.**

**Aktau Trade Sea Port**

**Реконструкция паромного терминала.  
Reconstruction of the ferry terminal**

**Отчет № 4  
Report № 4**

***Строительная организация***

**Construction organization**

***Менеджер проекта***

**Project manager**

***АО «AZERKORPU»***

**JSC «AZERKORPU»**

***Д. Орлов***

**D.Orlov**



Технический контроль  
Kazdorproject.

Technical control  
Kazdorproject.

Представитель Инженера  
Resident Engineer

Tractebel Development Engineering &

Tractebel Development Engineering &

В. Рогачев.  
V.Rogachov

г.Актау, 2001 г.

Актау, 2001

1. Общая часть.

1. General part

Контракт:

Contract:

Наименование объекта:

Name of the object:

Место нахождения объекта:

The place of location of the object:

Финансирование:

Financial:

Заказчик:

Customer:

Генеральная подрядная строительная организация:

General contracting construction organization:

ТАСИС № 00-0157

TACIS № 00-0157

Реконструкция паромного терминала.

Reconstruction of the ferry terminal

Мангистауская область, г.Актау.

Mangistauskaya region, Aktau

Европейская Комиссия в рамках технической помощи  
ТАСИС

Республики Казахстан.

European Commission of the technical help to Republic  
Kazakhstan

Актауский Торговый Морской Порт.

Aktau Trade Sea Port

АО «AZERKORPU», г. Баку, Азербайджан.

JSC "Azerkorpu" Baku, Azerbaijan

Технический контроль:

Tractebel Development Engineering, г.Брюссель, Бельгия,  
Каздорпроект, г. Алматы, Казахстан.

Technical control:

Tractebel Development Engineering, Brussels, Belgium  
Kazdorproject, Almati, KAzakhstan

Отчетный период:

С 20 февраля 2001г. по 20 апреля 2001 г.

График производства работ изменен 30.01.01г. в связи с невыполнением позиций ранее принятого графика.

Reporting period:

From 20 February 2001 to 20 April 2001

Schedule of the work processing was changed at 30.01.01 in connection with non-execution of the positions before accepted schedule.

2.Сводная отчетная таблица.

2. Summary reporting table

Таб.№1 – table

№ 1

№ пп	Наименование работ, действий, событий. Description of the activities	Ед. Изм Unit	Количество по контракту Q-ty by the contract	Выполнено с начала работ Execution from the starting of work	За отчетный период For the reporting period	По Графику By the schedule	Отставание от графика Delay from the schedule	Опережение графика Leading of the schedule	Примечания Notice
1	2	3	4	5	6	7	8	9	10
1	Работы: Works	EU							
	а) А. Общие позиции Total position		148000	94700	11700	109360	14660		
	б) В. Морские работы, структура причала Sea works, berth structure		94050	28450	22027	447790	16340		
	в) С. Работы на уклоне – Works on the slope		302446	52812	52812	95724	42912		
	г) Е. Каркасы и механизмы – Carcass and mechanism		100800	25656	22820	53440	27784		
	д) D. Центральная контрольная башня Central control tower		71880	49424	48956	49880	456		
	е) F. Работы по железнодорожным путям Railway works		50000	42500	24400	50000	7500		
	ж) G. Электроснабжение Power supply		172740	82852	82852	172740	89888		
	з) H. Земляные работы и асфальтовые покрытия. Earth works and asphalt pavement		195500	78200	56205	123100	44900		

и) I. Разное miscellaneous		125800	40180	40180	10912	-	29268	
и) Дополнительные работы Additional works		218308	52531	48331	--	-	52531	Письмо ППИ № А-46 Letter RE № А-46
<b>ИТОГО:Total</b>		<b>1717410</b>	<b>547305</b>	<b>410283</b>	<b>709946</b>	<b>244440</b>		

1	2	3	4	5	6	7	8	9	10
2	Авансовые платежи- Advance payment	%	40	40	40	40	Нет no	Нет No	
3	Поставка оборудования для комплектации- Supply of the equipment for the complete	%	100	55	50	60	5	Нет No	Оборудование на стадии доставки Equipment on the stage of supply
4	Поставка строительных материалов Supply of the construction material	%	100	65	60	70	5	Нет no	Ведется в настоящее время It is executing at the present time
5.	Трудозатраты Man-hour Рабочих – workers Механизаторов -mechanization Инженеров и менеджеров –engineer &manager	Чел- час Man/ hour		24410 4360 5244	20194 2700 2932	26851 4796 5769	10% 10% 10%	Нет no	
6	Обеспечение строительными машинами, механизмами и оборудованием Supply of the construction cars, mechanism and equipment	%	100	95	45	95	0	Нет no	
7	Несчастные случаи на производстве Accident on the works	Кол. q-ty	—	Нет No	Нет No	—	—	—	
8	Случаи вредного воздействия на окружающую среду cases of harmful influence on the environment.	Кол. q-ty	—	Нет no	Нет No	—	—	—	

Отчетный материал. Report material

3.1. Основные работы. –Main works

Таб.№2-table № 2

№ пп	Шифр работ Code of the works	Описание работ Description	Спецификация Specification	Ед. изм Unit	Объем работ. Volume of the work				Срок выполнения. Due date		Исполнительный документ. Executive documents
					Всего по проекту Total by the project	Выполнено за отчетный период. Executed for the reporting period	Выполнено с начала работ Executed from the starting of works		По плану, Начало – конец By the plan Star-end	Фактически, начало – конец Factual Start-end	
							объем volume	%			
1	2	3	4	5	6	7	8	9	10	11	12
1	A1	Мобилизация участка Mobilization site	4.1	%	100	15	100	100	20.10.00 – 20.11.00	20.10.00	Акт №2 Act № 2
2	A2	Тесты Tests	4.1	%	100	15	15	15	20.11.00- 20.06.01	10.01.01- 20.06.01	лабораторные анализы laboratory analyses
3	A3	Рабочие проекты и технологии Working projects and technology	4.2	%	100	5	85	85	01.11.00 – 10.02.01	01.11.00-	Рабочая документация, доработка на месте Working documentation, updating on the place
4	B2	Очистка и защита свай на центральном пирсе Cleaning and protection piles on the central pier	4.5	M <sup>2</sup>	150	0	0	0	01.02.01 – 20.03.01	Не начаты Not started	Доставка материала Supply material
5	B3	Очистка и защита свай на указательном пирсе Cleaning and protection piles on the finger pier	4.5	M <sup>2</sup>	65	0	0	0	01.03.01 – 01.04.01	Не начаты Not started	Доставка материала Supply material
6	B5	Ремонт покрытия бетонных стен на центральном пирсе Repair of the covering of the concrete walls on the central pier	4.6	M <sup>2</sup>	120	53	53	44	01.03.01- 01.04.01	17.03.01	Форма №3, согласование технологии Form № 3

1	2	3	4	5	6	7	8	9	10	11	12
7	B8, B11	Установка шин на центр. и боковом пирсе. Сортировка шин. Изготовление крепежных элементов. Сборка шин. The installation of tyres on central and lateral pier. Sorting of tyres. Manufacturing of fastening elements. Assembly of tyres.	4.7 4.9	%	100	15	40	40	10.03.01 – 10.05.01	08.02.01	Форма №1-6, № 1-14, №1-18 Form №1-6, № 1-14, №1-18
8	B13	Ремонт асфальтобетонного покрытия на центральном пирсе Repair of the asphalt-concrete pavement on the central pier	4.11	M <sup>2</sup>	1600	0	0	0	10.03.01- 10.05.01	Не начаты Not started	Стадия рассмотрения и согласования Stagy of the discussion and agreement
9	B14	Ремонт бетонного покрытия на боковом пирсе Repair of the concrete pavement on the lateral pier	4.12	M <sup>2</sup>	50 +115	165	165	100	01.03.01 – 10.03.01	07.12.00	Акт №5 Act № 5
10	B15	Берегоукрепление Shore protection	4.13	Пм Rm	90	40	22	45	20.11.00 – 20.02.01	25.11.00	Форма №1-2. Форма № 2-2. Form №1-2. Form № 2-2.
11	C1	Разборка существующей проезжей части Disassembly of the existing roadway	4.14	M <sup>2</sup>	674	674	674	100	01.04.01 – 10.04.01	23.03.01- 13.04.01	Акт №6 Act № 6
12	C2	Демонтаж рельсов внешних и внутренних пролетов Disassembling of the rail of the external and internal span	4.15	M	372	372	372	100	01.04.01 – 10.04.01	23.03.01- 13.04.01	Акт №7 Act № 7
13	C3,C4	Подъемка пролетных строений и поперечной подъемной балки над уровнем моря. Lifting of the span structure and cross-lifting-beam under the sea level	4.16	%	100	40	40	40	10.03.01- 01.04.01	23.03.01	Пояснительная записка «Подъемно опускной мост» Explanatory report "Lifting-lowering bridge"
14	C5,C6	Перемещение и ремонт стержневых опор	4.17	%	100	40		40		27.03.01-	Акт обследования №2, ведомость дефектов

		Displacement of the bar support									Inspection act №2, defects list
15	C7,C8	Очистка металлоконструкций. Перекраска пролетных строений. Cleaning of the metal structure. Repainting of the span structure	4.18	%	100	15		15	1.04.01- 1.06.01	23.03.01	Подготовительные работы. Дефектовка металлоконструкций Preparatory works Defects of metal structure



1	2	3	4	5	6	7	8	9	10	11	12
16	C10, C11	Переоборудование пролетов Reequipment of the spans	4.21	Тн tn	360						Пояснительная записка «Подъемно опускной мост» Explanatory report "Lifting- lowering bridge"
17	C12	Проезжая часть на мосту Roadway on the bridge	4.22	М <sup>2</sup>	674	15	15	15	10.04.01- 10.06.01	10.04.01	
18	D1	Восстановление строительной крыши Reconstruction of the construction roof	4.23	%	100	95		95	10.02.01- 01.03.01	24.03.01	Форма №1-30, №1-32 Form №1-30, №1-32
19	D2	Восстановление внешних лестниц Reconstruction of the external stairs	4.24	поз pos.	1	1	1	95	10.02.01- 01.03.01	17.03.01	Форма №1-33. Form №1-33.
20	D3	Обновление внутренних стен Renovation of the internal walls	4.25	%	100	80		80	20.02.01 – 01.04.01	24.03.01	Форма №1-34 Form №1-34
21	D4	Удаление контрольных панелей и пилотных станций Removal of the control panels and pilot stations	4.26	поз. pos	1	0	1	100	01.02.01- 10.02.01	15.02.01- 17.02.01	Акт приемки № 4 Acceptance report № 4
22	D5, D6	Поставка и установка новых контрольных панелей и ведущей станции Supply and setting of the new control panels and leading station	4.27	По з Ро s	1	1	1	70	10.02.01- 20.04.01	5.04.01	Оборудование на участке. Сертификат на рассмотрении Equipment on the site
23	E1	Перемещение противовесов Displacement of the counterweight	4.29	По з Ро s	1	1	1	20	10.03.01- 20.03.01	10.03.01	Пояснительная записка «Подъемно опускной мост» Explanatory report "Lifting- lowering bridge"
24	E3	Откачка воды из шахт противовесов.	4.30	%	100	0	100	100	01.01.01- 01.02.01	11.12.00- 28.01.01	Акт приемки №3 Acceptance report № 3

		Dewatering from the counterweigh pit									
25	E4	Изоляция шахт противовесов Isolation of the counterweigh pit	4.31	%	100	10	10	10	20.02.01- 01.03.01	25.02.01	Стадия детального обследования и принятия решения Stage of the detail control and acceptance of the decision
26	E5, E12	Перемещение подъемных тросов Displacement of the lifting line (rope)	4.32	%	100	20	20	20	20.03.01- 20.05.01	10.03.01	Стадия транспортировки материала. Изготовление нового крепления Stage of the material transportation. Manufacture of the new fastening

1	2	3	4	5	6	7	8	9	10	11	12
27	E6-E7	Разборка, чистка, смазка и переоборудование башенных механических устройств внешних вышек Disassembly, cleaning, lubricate and reequipment of the tower mechanical units of the external towers (masts)	4.33	%	100	75	80	80	10.02.01-01.05.01	29.01.01	Форма № 1-10 Form № 1-10
28	E8	Удаление электрических моторов, контрольных коробок и кабелей внешних вышек Removal of the electrical engines, control box and cable of the external tower (masts)	4,34	%	100	10	10	10	10.03.01-20.03.01	29.01.01	Акт №8 Act № 8
29	E9	Удаление электрических моторов, контрольных коробок и кабелей внутренних вышек Removal of the electrical engines, control box and cable of the internal tower (masts)	4.34	%	100	10	10	10	20.02.01-01.03.01	29.01.01	Акт №8 Act № 8
30	E10	Ремонт стекол и окон всех вышек Repair of the glasses and glasses of the all tower (masts)	4.35	%	100	90	90	90	10.02.01-20.03.01	01.03.01	Форма №1-30, №1-37, №1-35. Form №1-30, №1-37, №1-35.
31	E11	Перекраска внешних структур на башнях Repainting of the external structure on the towers	4.36	По з По s	1				20.04.01-20.05.01		Согласование колера Making agree of the colour
32	E13, E14	Переоборудования противовесов Reequipment of the counterweight	4.37	Тн tn	288				20.04.01-20.05.01		Пояснительная записка «Подъемно опускной мост» Explanatory report "Lifting-lowering bridge"
33	F1	Разборка, чистка, смазка и переоборудование рельсовых стрелок. Тестирование состояния стрелочных перевод.	4.39	%	100	80	100	100	01.02.01-01.04.01	18.01.01-12.04.01	Форма №1-7. Form №1-7.

		Disassembly, cleaning, lubricating and reequipment of the rail switches. Testing of the pointwork's conditions									
34	F2	Восстановление ж/д контрольной комнаты Reconstruction of the rail road control room	4.40	%	100	90		90	10.02.01-10.03.01	17.02.01	Форма №1-19, №1-23, №1-28 Form №1-19, №1-23, №1-28

1	2	3	4	5	6	7	8	9	10	11	12
35	F3	Восстановление ж/д контрольной панели, пилотного оборудования и коммуникационного кабеля. Тестирование постовых устройств СЦБ Reconstruction of the rail road control panel, pilot equipment and communication cable . Testing of the post units СЦБ.	4.41	%	100	55	80	80	20.01.01-01.04.01	15.01.01	Форма №1-19, №1-20, №1-22. Form №1-19, №1-20, №1-22.
36	F4	Восстановление дорожных светофоров. Reconstruction of the road traffic-light	4.41	%.	100	40		70	20.01.01-01.04.01	15.01.01	Форма №1-20, №1-23. Работы ведутся в настоящее время Form №1-20, №1-23. Works are executing at the present time
37	F5	Железнодорожная автоматика Railroad automation	Отсутствует Absence	%	0	80	80	100		15.01.01	Протокол №6, предлагаемо приложение к контракту №1. Protocol № 6, Propose the appendix to the contract №1
38	G1, G3	Удаление старой трансформаторной подстанции. Установка новой трансформаторной подстанции Removal of the old transformer substation. Installation of the new transformer substation	4.42 4.44	По з Р о s	1	60	60	60	1.03.01-01.04.01	5.04.01	Форма № 1-26 Оборудование на участке. Сертификат на рассмотрении form № 1-26. Equipment on the site
39	G2	Распределительная кабель от главной подстанции к новой трансф. Подстанции Distribution cable from the main substation to the new transformer substation	4.43	По з Р о s	1	20	20	20	10.02.01-01.04.01	10.04.01	Форма №1-31. Транспортировка материалов, подготовительные работы. Form № 1-31. Material transportation, preparatory works

1	2	3	4	5	6	7	8	9	10	11	12
40	G4	Прокладывание кабельной системы от подстанции к контрольной башне Laying of the cable system from the substation to the control tower	4.45	%	100	30		30	1.03.01-1.04.01		Стадия согласования. Кабельная продукция на месте Stage of the agreement. Cable production on the site
41	H1	Покрытие парковочной территории рядом с рампой. Перенос таможенной эстакады (доп. работы) Covering of the parking area next to ramp Transportation of the customs platform (additional works)	4.46	%	100	25		40	20.01.01-01.05.01	18.01.01	Форма №1-9№1-12, №1-17, №1-16. Заготовка материала, подготовка основания Протокол № 6 Form №1-9№1-12, №1-17, №1-16. Storage of the material, preparation of the base. Protocol № 6, Propose the appendix to the contract №1
42	H2	Покрытие парковочной площадки рядом с входом в порт. Covering of the parking area next to port enter	4.45	%	100	40		40	20.02.01 – 01.05.01	18.01.01	Форма №1-8. Заготовка материала, подготовка основания form №1-8. Storage of the material, preparation of the base
43	I1	Система водоснабжения. Water supply system	4.49	%	100	10		90	10.02.01-20.04.01	16.03.01	Форма № 1-32 Form № 1-32
44	I2	Сеть сточных вод Network of the sewage Строительство канализационной насосной станции (дополнительные работы) Construction of the sewerage pump station (additional works)	4.50	%	100	40	50	50	40	10.02.01-20.04.01	Протокол №10 Protocol № 10
45	I3	Сеть стока дождевых вод Network of the drainage of the rain water	4.51	%	100	10		10	10.02.01-20.04.01	19.02,01	Форма №1-24. Стадия согласования form № 1-24. Stage of the agreement

46	I4	Обустройства переезда железнодорожными сигналами Arrangement of the crossing by the railroad signals	4.52	По з pos	1	0	0	0	01.03.01- 10.03.01		Стадия согласования Stage of the agreement
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1	2	3	4	5	6	7	8	9	10	11	12
47	I5	Восстановление освещения Reconstruction of the lighting	4.53	%	100	50		50	1.05.01- 1.06.01	5.04.01	Материал на месте, восстановление кабельных каналов Material on the place, reconstruction of the cable trench
48	B1	Очистка уклонов от резиновых шин и обломков Cleaning of the slopes against the rubber tyres and debris	4.4	%	100	0		0	10.03.01 – 20.03.01	Работы не начаты The works are not started	После завершения основных работ After completion of the main works

3.2 Фотографии: участки производства работ.

3.2 Picture: sites of production activities

## 3.3. Поставка на площадку оборудования и материалов.

## 3.3. Delivery of the equipment and materials on the site

Таб.№3  
Table

№ пп	Наименование оборудования, материалов Description of the equipment and materials	Ед. изм Units	Кол-во Quantity	Начало производств а Beginning of the production	Инспекция подрядчика Contractor's inspection	Испытания Tests	Примечания Note
1	2	3	4	5	6	7	9
1	Отделочные материалы Finishing materials	%	90			Ежедневный контроль Daily control	
2.	Металлопрокат Metal-roll	%	95		Сертификат Certificate №114-10395 №130-2308 №130-3756		Стандарт ГОСТ14637-89, ГОСТ19903-74, ТУ 14-4-440-99, ГОСТ8239-80, ГОСТ535-88, ГОСТ8240-89 Standard GOST14637-89, GOST19903-74, TU 14-4-440-99, GOST8239-80, GOST535-88, GOST8240-89
3.	Оборудование для управление мостом Equipment for bridge control	%	100		Технические паспорта на панели ШСУ Technical passports on the panel ШСУ		Индивидуальный заказ
4.	Трансформаторная подстанции Transformer substation	поз	1		Технический паспорт Technical passport Ш11450ПС Ш8043ПС		
5.	Кабельна продукция Cable production	%	50		По спецификации By specification		



6.	Оборудование подъемных механизмов Lifting mechanisms equipment					Контроль в баку	Стадия доставки материала Stage of material delivery
7.	Электрооборудование Electrical equipment	%	100				

1	2	3	4	5	6	7	8
8.	Железнодорожное оборудование Railway equipment	%	99			Сертификация и испытание при пуско-наладочных работах Certification and tests of balancing and commissioning works	
9.	Рваный камень и щебень Carved stone and crushed stone	%	60		Сертификат №0431384 Certificate		
10.	Специализированные окрасочные материалы special painting materials	%	20		Сертификат Certificate КСС №0516514, №0000942188 №0554639 Гигиенический сертификат Hygienic certificate №Н-6-2-3616-363		

3.4. Списки персонала и оборудования.

3.4. Lists of the stuff and equipment

Таб.№4

Table

№ пп	Наименование категории персонала The name of the category of the stuff	Кол-во Quantity	Отработано с начала работ Worked from the starting of the works	Отработано за отчетный период Worked during reporting period	Примечание Note
1	2	3	4	5	9
1	Инженеры и менеджеры Engineers and managers	7	5244	2932	
2	Механизаторы Mechanics	6	4360	2664	
3	Рабочие Workers	66	24410	20194	
4	Весь персонал All stuff	79	34014	25790	
5	В том числе граждан Казахстана Including the citizens of Kazakhstan	46	17007	12895	

Таб.№5

Table №5

№ пп	Список машин, оборудования, механизмов The list of machines, equipment, mechanisms	Марка Mark	Состояние Condition	Отработанное время за отчетный период The worked time during the accounting period	Примечания Note
1	2	3	4	5	6
1.	Автосамосвал Dump truck	Камаз-55511	Хорошее Good	293	
2.	Автосамосвал Dump truck	Камаз-55511	Неудовл. Unsatisfactory	нет	ремонт repair
3.	Автосамосвал Dump truck	Маз-5551	Хорошее Good	383	
4.	Автокран 12,5 тн Auto crane 12,5 tn	Маз-5551 КС-3577	Хорошее Good	390	
5.	Экскаватор Excavator	ЭО-4224	Хорошее Good	390	
6.	Тягач с прицепом Tractor with the trailer	Маз-5549	Хорошее Good	176	
7.	Электропила, 2шт Electrosaw, 2 pieces	BOSH-54 W 170	Хорошее Good	264	
8.	Сварочный аппарат, 4 шт The welding apparatus, 4 pieces	разные	Хорошее Good	552	
9.	Шлифовальная машина, 6 шт Polishing machine, 6 pieces	Лагунда «BOSH-23J»	Отличное Perfect	856	
10 .	Прицеп Trailer	Kzap 9370	Хорошее Good	176	
11 .	Резак по металлу, 3 шт Cutter for metal, 3 pieces		Хорошее Good	528	
12 .	Гидравлический домкрат (телескопический), 4 шт	HOESCH	Отличное Perfect	320	

	Hydraulic jack (telescopic), 4 pieces				
13	Насосная станция Pump station	HOESCH	Хорошее Good	320	
14	Электродрель-молоток Electrodrill-hammer	BOSH	Хорошее Good	30	
15	Сварочный аппарат The welding apparatus		Хорошее Good	184	
16	Водяной насос Water pump		Хорошее Good	Нет No	
17	Автосамосвал Dump truck	Вольво	Отличное Perfect	16	Аренда Rent
1	2	3	4	5	6
18	Автосамосвал Dump truck	Вольво	Отличное Perfect	16	Аренда Rent
19	Пескоструйный аппарат, 2 шт Sand blaster, 2 pieces	KIISS	Отличное Perfect	Установка на месте Installation on the place	
20	Компрессор Compressor	Hats	Отличное Perfect	Установка на месте Installation on the place	
21	Подмости и вспомогательное оборудование Scaffolds and subsidiary equipment				

3.5. Статистика несчастных случаев, случаев вредного влияния на окружающую среду.

3.5. Statistics of accidents and cases of harmful influence on the environment.

Таб.№7

Table

№ пп	Наименование и подробное описание случая. The name and detailed description of the case.	Ед. изм. Units	Кол-во Quantity	Акты внутреннего расследования The acts of internal investigation	Акты расследования сторонними организациями The acts of investigation by exterior organizations	Примечания Note
1	2	3	4	5	6	7
1	Несчастные случаи Accidents		Нет No	Нет No	Нет No	
2	Попадание древесных щепок в воду Hitting of wood chips in water	Поз Pos	1	Нет No	Нет No	Зона производства работ на акватории заграждена боновым ограждением, производится уборка мусора с плавсредств. The zone of works execution on water area obstructed by slick bar, debris from floating vehicles is scavenged

4. Заключение.

В настоящее время активность на строительной площадке идет на увеличение, отставание от графика работ сократилось до 23%. Основные строительные материалы и оборудование на стройплощадке. Отставание по поставке материала сократилось до 5%. Для обеспечения выполнения контракта в срок принимаются следующие меры:

- Увеличение штата инженеров на строительной площадке
- Увеличение штата рабочих специалистов
- Поставка дополнительных строительных машин и механизмов

#### 4. Conclusion.

Now activity on the construction site increasing, the delay from the schedule of works was reduced up to 23%. There are basic building materials and equipment on the building site. The delay on delivery of a material was reduced up to 5%. For providing with execution of contract in time, the following measures are accepted:

- Increasing of the engineers staff on the construction site
- Increasing of the working experts staff
- Delivery of additional building machines and mechanisms

Tractebel Development Engineering & Kazdorproject			AZERKORPU		
Отчет зарегистрировал: Постоянный Представитель Инженера The report registered: Resident Engineer	Дата Date	Подпись Signature	Отчет составил: Менеджер проекта The report made : Project manager	Дата Date:	Подпись Signature
В. Рогачев V.Rogachov			Д. Орлов D.Orlov		

## **ANNEX 5**

Dismantling of existing wooden deck and support steel

Ramp after dismantling of deck

Ramp after desk dismantling viewed from upper end

Removal of steel deck supports for sandblasting on shore

Steel deck support element, after sandblasting

Preparation of parking area









