# Attachment 5 : SOFT COMPONENT (TECHNICAL ASSISTANCE) PLAN

# "ASSISTANCE FOR THE ENHANCEMENT OF THE MAINTENANCE AND MANAGEMENT OF MEDICAL EQUIPMENT BY THE EQUIPMENT USERS"

#### 1. Background

Finding money to address the failure of medical equipment whose warranty periods have expired is a major challenge for medical facilities in Tajikistan. Many facilities do not employ enough technicians to repair, maintain or otherwise manage medical equipment, so users (physicians, nurses and other medical workers) of equipment procured under this Project need to inspect it daily and otherwise take proper preventive measures to keep it from failing so that it can be operated and maintained for long periods of time. Therefore, soft components that include daily inspections and other technical guidance from Japanese technicians will be implemented to ensure that there is sufficient meaning to helping hospital managers and equipment procured with grant aid cooperation while maintaining proper precision and making use of said guidance.

#### 2. Goal of Soft Component

The equipment procured through the cooperation project is maintained and managed appropriately at target medical facility.

#### 3. Outcome of Soft Component

Each medical facility develops a system for medical equipment maintenance and management (personnel and organization), including equipment management logbooks and user-level preventive maintenance checkup manuals.

## 4. Methods to Confirm Outcome Achievement

Table 1 shows the methods to confirm outcome achievement.

Table 1	Methods to Confi	m Outcome Achievement

Soft Component Summary							
≪Goal≫	≪Method of Confirmation≫						
The equipment procured through this project is maintained and	Confirm that make out the maintenance checkup manual,						
managed appropriately.	equipment management logbook through the activities.						
≪Outcome≫	$\ll$ Method of Confirmation $\gg$						
1) The person in charge of equipment management is clearly							
defined.							
1: Everyone knows who the person in charge of equipment	Confirm that all staff members can write the name of the						
management is.	person in charge of equipment management (carry out						

2: Everyone can know who substitutes for the person in charge	before the completion of activities).
of equipment management when he is absent.	
2) A system to practice preventive maintenance checkup of each	
equipment and the systematic flow of information concerning	
each equipment are established.	
1: It becomes easier to perform checkups.	Confirm that the person in charge of checkups has been
2: The places and frequency of checkups are clearly defined.	made clear, checkup manuals have been prepared, and the
3: The person in charge of checkups is clearly defined.	systematic flow of information has been established (carry
4: Everyone can know who substitutes for the person in charge	out before the completion of activities).
of checkups when he is absent.	
5: Information concerning equipment is shared between	
medical workers and maintenance engineers.	
3) Management logbook for each equipment is maintained.	Confirm that management logbooks are maintained so that
1: Equipment management logbooks are maintained so that	everyone can quickly know the condition of equipment
one can quickly know who used which equipment when	(carry out before the completion of activities).
and how.	
2: Equipment management logbooks are maintained so that	
one can quickly know what trouble occurred in which	
equipment when.	
4) The cost needed for maintenance checkups is identified and the	It is confirmed that a budget application form has been
process of budget application is sorted out.	completed and application procedures are followed strictly
1: A budget application form is completed and the procedures	(carry out before the completion of activities).
for budget application for the next fiscal year are carried out	
appropriately.	

## 5. Soft Component Activities (Input Plan)

Activities of soft component will be carried out 3 days workshop (first dispatch program) and 3.5 days seminar (second dispatch program) to heads of facilities, responsible persons from facility management departments, representatives of major clinical departments (physicians, nurses, midwifes) and maintenance managers of facilities and medical equipment to maintain and manage the equipment procured through this project at each facilities. 15 persons from the Maternity Hospital No.3, 15 persons from Khatlon Oblast Provincial Hospital and 10 persons from 5 number hospitals (2 persons from each number hospital) will participate in these activities. In the first dispatch program, participants will try to find problems concerning the maintenance and management system of medical equipment and provision for those problems they have. Based on this, they will make equipment management logbook (draft) and preventive maintenance of equipment using the equipment management logbook (draft) and preventive maintenance of equipment using the equipment management logbook (draft) and preventive maintenance of logbook and manual.

#### 1) Workshops (Primary Dispatch Work)

Workshops will be held to intimately familiarize hospital staff members with maintenance conditions for medical equipment at target hospitals. To foster a sense of ownership among hospital staff members, pre-planned participatory methods will be employed at workshops and will often require hospital staff members to provide opinions on existing problems with maintenance and management of medical equipment. Consultants will analyze activities and input required to resolve the problems coached out of staff members and clarify actions to be taken to improve medical equipment management in an organized manner. Furthermore, drafts of preventive and regular maintenance manuals, charts showing the flow of information within hospitals and medical equipment maintenance ledgers will be prepared based on the results obtained during workshops.

«Project summary»	$\ll$ Index of achievement $\gg$	≪External condition≫
≪Overarching goal≫		Accidents caused by human neglect do
Fewer occasions in which daily medical		not occur (natural disasters are
practice is impeded by the unavailability of		unavoidable). (The practice of safety
medical equipment.		management does not change.)
≪Goal≫	$\ll$ Index of goal achievement $\gg$	Repair parts become unavailable.
The equipment provided through the		(Situation of information collection
cooperation project is maintained and	Changes in the actions after equipment	concerning equipment manufacturers
managed appropriately.	failures	does not change.)
«Outcome»	$\ll$ Index of outcome achievement $\gg$	
1) The person in charge of equipment		The person in charge of equipment
management is clearly defined.	Identification of the person in charge	management (including substitute) and
1 : Everyone can know who is the person	of equipment management	the person in charge of checkups
in charge of equipment management.	Identification of substitute for the	(including substitute) do not be absent
2: Everyone can know who substitutes for	person in charge of equipment	at the same time.
the person in charge of equipment	management	(The recognition of teamwork does not
management when he is absent.		change.)
2) A system for preventive maintenance		
checkup of each equipment and the		
systematic flow of information		
concerning each equipment are		
established.	Preventive maintenance checkup	
1: It becomes easier to perform checkups.	manual	
2: The places and frequency of checkups		
are clearly defined.	Identification of the person in charge	
3: The person in charge of checkups is	of checkups	
clearly defined.		

#### Table 2 PDM Used in Workshop (Draft)

4: Everyone can know who substitutes for	Identification of substitute for the	
the person in charge of checkups	person in charge of checkups	
when he is absent.		
5: Information concerning equipment is	Diagram of information flow system	
shared between medical workers and	with and outside the facility	
maintenance engineers.		
3 ) Management logbooks for each		
equipment is maintained.	Equipment management logbook	
1: Equipment management logbooks are		
maintained so that one can quickly know		
who used which equipment when and		
how.		
2: Equipment management logbooks are		
maintained so that one can quickly know		
what trouble occurred in which equipment		
when.		
$\ll$ Activity to obtain outcome and its index $\gg$		«Matters/input provided by the
* Derived from the workshop		facility≫
		* Derived from the workshop

#### 2) Seminars and Technical Guidance (Secondary Dispatch Work)

The contents of the drafts of preventive and regular maintenance manuals and medical equipment maintenance ledgers prepared during the primary dispatch work and according operational methodology will be explained to the hospital side. Hospital staff members will provide their opinions on the drafts, and corrections and revisions will be made as necessary to produce final drafts. Then, consultants will give demonstrations on actual maintenance methods used on procured equipment and participants will use the procured equipment for practical training (opportunities will be created for seminar participants to present what they learned at the seminars to other participants so that all participants may deepen their understanding together).

#### 3) Personnel Plan

Two engineers are planned. The first engineer takes charge of works concerning the development of the medical equipment maintenance system. The second engineer produces the preventive maintenance checkup manuals for the 18 items<sup>1</sup> that are considered important among the planned medical equipment and practices maintenance checkup activities aiming at the widespread consistent use of these manuals through the seminar.

<sup>&</sup>lt;sup>1</sup> Anesthesia Apparatus, Electrosurgical Unit, Patient Monitor, Neonatal Monitor, Ventilator, Ultrasound Scanner, Fetal Doppler, Vacuum Extractor, Cardiotocograph, Oxygen Concentrator, Nebulizer, Autoclave, Hot Air Sterilizer, Infusion Pump, Syringe Pump, Infant Incubator, Infant Warmer, and Spectrophotometer.

- Engineer 1: Guiding the development of medical equipment maintenance system (1 person)

During the first dispatch, Engineer 1 takes charge of organizing and holding the workshop and sorting out the elements obtained from the workshop. During the second dispatch, he takes charge of organizing and holding the seminar and providing guidance related to the introduction and operation of the new system for medical equipment maintenance.

As a concrete example, the cycle flow involving the elements 2 through 5 as shown in the Figure below is explained. Focusing on the PPM performed by users, the second dispatch program aims to cerate "an environment in which equipment failures are less likely to occur."

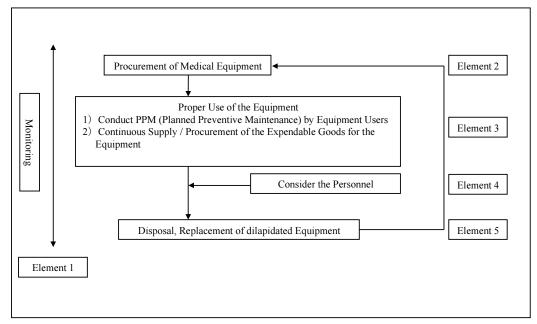


Figure 1 Elements and Flow Related to the Medical Equipment Operation & Management

Engineer 2: Preparing medical equipment maintenance instructions & providing guidance (1 person)
 During the first dispatch, Engineer 2 assists in the organization and holding of the seminar and
 prepares the draft versions of the preventive maintenance manuals for the procured medical equipment.
 During the second dispatch, he organizes and holds the seminar and performs the demonstration of the
 preventive maintenance checkup of medical equipment. In order to ensure the appropriate use of these
 manuals at each medical facility, he practices the introduction of the rules and mechanisms for the
 centralization of the management of manuals, as well as for ensuring that relevant personnel understand
 who the person in charge of management is.

## 6. Method of Procurement of Resources for Implementation

In view of the following points, the engineers performing these activities should be the personnel from the Japanese consultant, because of the following reasons.

Because it is difficult to find the proper personnel to handle the activities in the Ministry of Health and each facility and also the consultant staffs have participated in the two preparatory studies, they have sufficient understanding of the approach to organizational ability enhancement and the operation methods that are appropriate to the recipient sites. Therefore, they can effectively and efficiently conduct the workshop and the seminar. For this reason, the Japanese consultant directly provides assistance.

## 7. Implementation Processes (Manpower, Form, Timing, Duration, etc. of Each Work / Term)

The number of engineers should be 2. According to the local work practice, the amount of work should basically be 8 hours a day, 5 days a week. The first dispatch program is conducted after the selection of the contractor procuring medical equipment and the second dispatch program is conducted after the completion of the installation of procured equipment. The duration of each of these programs (first dispatch and second dispatch) is planned to be about 1 month. Because it is important to have the counterpart (relevant hospital personnel who take lead in this activity) develop an awareness of problems and appropriately understand and recognize the importance maintenance of medical equipment, the work in the recipient country is conducted in 2 phases.

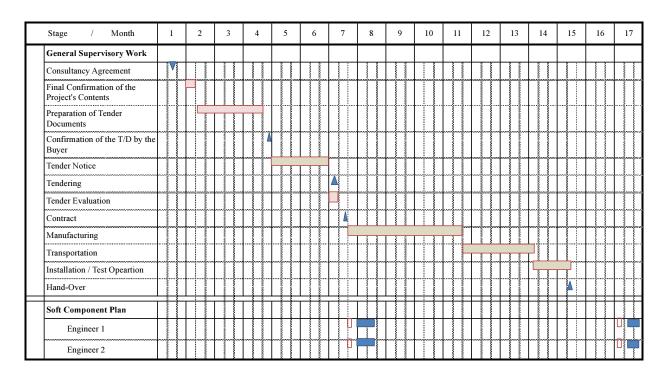


Figure 2 Soft Component Implementation Schedule

# 8. Outputs from the Soft Component

## 1) First Stage

- Workshop report (report concerning the names of participants, all "elements" obtained in the workshop, and the details of the process leading to this achievement)
- Report on the requests and proposals concerning the organizational improvement of equipment maintenance (report concerning the matters decided in the workshop and the outline produced)
- Preventive maintenance checkup manuals for medical equipment reflecting the opinions of on-site workers (draft). These are prepared for selected items of medical equipment.

# 2) Second Stage

- Preventive maintenance checkup manuals (final) and system description documents describing the definition of checkup personnel, the flow of objects and information within the hospital (flow chart), rules, etc.
- Management logbooks (forms for recording information from daily and periodical inspections and logbooks for the consolidation of this information)

# 9. Responsibility of the Executing Agency in the Recipient Country

The expenditures concerning relevant personnel expected to arise from the workshop, seminar, etc. held at each facility are covered by the Tajikistan side.

# Attachment 6-1 : Geological Survey Report-1

Љумхурии ољикистон Чамъияти дорои масъулияти махдуди VSI «Востокстройинвест» Republic of Tajikistan Vostokstroyinvest LLC.

# Report on Geotechnical Conditions of the Premises of Shartuz Central District Hospital in Khatlon Oblast

(Excerpt)

September 2012

Person responsible for the surveyS.K. KhodjamurodovChief expertA.R. Ruziev

#### 1. Summary

This Report was created in accordance with contract documents agreed on September 5, 2012, between Vostokstroyinvest LLC., and Daiken Sekkei Inc. It serves as a certificate and written opinion and is based on source materials of the visual inspection of the construction site (conducted on September 8, 2012, including descriptions of the geomorphological or geotechnical properties of the sites); source materials of pit surveys at two points on the premises of the Central District Hospital, and tests and analyses of physical and mechanical properties of the soil; and data on the structures and history of the usage of the buildings on the site. The Report is for detail designing of water towers to be newly constructed as a water supply system for the Central District Hospital.

The purpose of this geological survey is to clarify geo-technological, geological and hydrogeological conditions of the construction site. The survey is compliant with the building standards, and Regulations SNiP 11-02-96 "Engineering Geological Investigations for Construction" and SNiP 11-105-97 "Rules for Engineering Geological Investigations for Construction". The methods of sampling, packing, transporting and storing soils are compliant with the national standard, "GOST 12071-2000". The field surveys on the grounds and laboratory tests were conducted in accordance with the relevant requirements of GOST.

No.	Type of Survey and Test	Date		
1	Visual inspection of the premises of the Central District Hospital for ex-ante evaluation of geotechnical conditions	September 8, 2012		
2	Excavation of 2 survey pits: Pit No. 1 (Sh-1) Pit No. 2 (Sh-2)	September 9, 2012 September 9, 2012		
3	Sampling of massive soils at each layer for laboratory analyses	September 9, 2012		
4	Laboratory tests, data processing and analyses	September 10, 2012		
5	Marshaling of the results of the field surveys and laboratory analyses, and creation of the certificate / written opinion (this Report)	September 15, 2012 September 30, 2012		

#### 2. Summaries of Surveys and Tests

3. Summary of Geotechnical Conditions of the Premises of Central District Hospital

Shartuz District is located in Khatlon Oblast in the southwest area of the Republic of Tajikistan, approximately 200km away from Dushanbe, the capital of the country. The Central District Hospital is sited in the west of the central area of the district. Land on the premises of the hospital and a part of its buildings are shown in Figure 1.

Shartuz District is geomorphologically classified as adyr relief area (gentle foothill landform with dry valleys in the Central Asia) or desert area. The temperature is high in summer and Afganets (hot and dry and dusty wind) frequently blows, which is why the area is foggy. The land is relatively flat and slightly undulated. The district has been long irrigated, and cotton is grown.

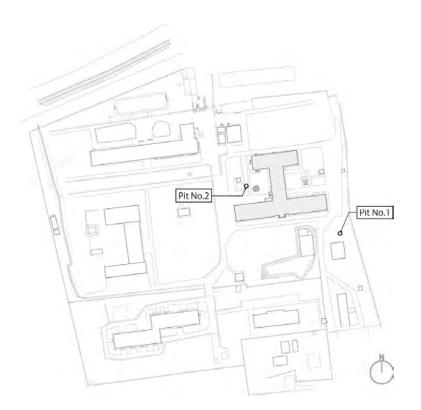
The geological structure of the site mostly consists of a thick layer of fine-grained clay soil. The entire land surface is covered by surface soil of 0.4 - 0.5m in thickness consisting of vegetation and soil. What should be especially noted is that many years of irrigation and malfunction of drains have been

raising the groundwater level in recent years. The seasonally-adjusted depth to the ground water level ranges 3.0 - 4.0m.

The land in Shartuz District which has been known as dry Beshkent lands is susceptible to deformation due to subsidence. On the land, a thick layer of loess is deposited, which is classifiable as "high" in terms of vulnerability to subsidence.

# 4. Physical and Mechanical Properties of the Soil

Two pits were excavated to investigate the properties of the foundation ground on the premises of Shartuz Central District Hospital. Pit No. 1 (excavated on September 9, 2012) is near the obstetric ward, and Pit No. 2 (excavated on September 9, 2012) is on the premises of the obstetric and pediatric ward. The distance between the pits is approximately 150 m.



depth	Soil density, t/m <sup>3</sup>	Natural moisture content, %	Moisture content in dried soil	Liquid limit, %	Plastic limit, %	Porosity	Plasticity index, %	Type and state of soil
1	2	3	4	5	6	7	8	9
Sh-1	1.65	12.9	1.46	28.5	20.3	0.85	8.2	Hard loam
1.0m	1.65	12.9	1.40	20.3	20.3	0.85	0.2	
Sh-2	1.80	22.6	1.47	28.9	20.1	0.84	8.8	Low plasticity
2.0m	1.80	22.0	1.4/	20.9	20.1	0.84	0.0	loam
Sh-2	1.83	12.5	1.62	28.1	19.8	0.67	8.3	Hard loam

1.0m								
Sh-2	1.97	22.2	1.61	28.6	19.6	0.68	9.0	Low plasticity
2.0m	1.97	22.2	1.01	28.0	19.0	0.08	9.0	loam

5. Analyses of Data from the Field Surveys and Laboratory Tests

The table clearly shows that the ground on the premises of Shartuz Central District Hospital is an accumulation of fine-grained loess and clay soil with plasticity index of 0.08-0.09, classified to loam. It should be pointed out, however, that data obtained from the pit surveys show that the physical and mechanical properties of the ground near Pit No. 1 differs from those of the ground near Pit No. 2. Attention must be first paid to soil framework density (density of dried soil): for example, survey data from Pit No. 1 shows that the density of dried soil of 2.0 m in depth is 1.46-1.47t/m3, whereas survey data from Pit No. 2 shows that the density is 1.61-1.62 t/m<sup>3</sup>.

The national moisture content of soil is also noticeable. Unlike the density, there is little difference among the pits in terms of the national moisture content of soil of 1.0 m and 2.0 m in depth, which are 12-13% and 22-23%, respectively. The fact that the soil has low natural moisture content and low density when it is dried (1.46-1.47t/m<sup>3</sup>) means a high porocity, which is a property of the ground vulnerable to subsidence.

Compaction tests with application of the single curve method were conducted to directly confirm the vulnerability to subsidence (See Figure 8). The test results have revealed that the soil at Pit No. 1 of up to 2.0 m in depth is classified as Type-1, that is, a ground that slightly sinks when it is moist. The ground near Pit No. 2 does not easily sink.

According to tables in SNiP 3.02.01-83 "Bases of Buildings and Structures", the strength and deformation properties of the ground on the premises of Shartuz Central District Hospital formulated in the natural process of deposition can be summarized as follows:

## Ground near Pit No. 1

- Cohesion	18 kPa
- Internal frictional angle	19°
- Deformation coefficient	11 MPa
- Design bearing capacity of soil	80 kPa (1.8kgf/cm <sup>2</sup> )

# Ground near Pit No. 2

- Cohesion	26 kPa
- Internal frictional angle	21°
- Deformation coefficient	16 MPa
- Design bearing capacity of soil	250 kPa (2.5 kgf/cm <sup>2</sup> )

Classification of the ground in terms of the degree of difficulty in leveling of ground is in conformity to Section 33a (loam) of Table 1.1 in SNiP 1V-2 - 82, and thus may vary depending on the types of

ground-leveling and machinery equipment to be used. In terms of chemical composition, the soil in question is slightly corrosive to concrete and steels of any kind.

The ground is classified into Type 2 in terms of earthquake-resistant design. The design seismic coefficient of land in Shartuz District is a seismic intensity of 7 according to SNiP II-7-81 "Construction in Seismic Area". However, a seismic intensity of 8 is adopted for the premises of the Central District Hospital in light of the geotechnical conditions (vulnerability to submergence and high groundwater level).

5. Conclusions and Recommendations

1) The grounds on the premises of Shartuz Central District Hospital is an accumulation of fine-grained clay soil (cohesive soil) such as loess loam. The ground near Pit No. 1 surveyed is prone to softening when it is moist, but the ground near Pit No. 2 is not. At both points, the soil up to 1.0m in depth is hard, and bears low plasticity at a depth of 1.0m and below.

The level of groundwater around Shartuz Central District Hospital is approximately at a depth of 3m from the natural ground surface. The seasonal fluctuation in the groundwater level ranges possibly between 2.5 and 3.3m.

# Attachment 6-2 : Geological Survey Report-2

Љумхурии ољикистон Чамъияти дорои масъулияти махдуди «Востокстройинвест»

VSI

Republic of Tajikistan Vostokstroyinvest LLC.

# Report on Geotechnical Conditions of the Premises of Jomi Central District Hospital in Khatlon Oblast

(Excerpt)

September 2012

Person responsible for the survey Chief expert S.K. Khodjamurodov A.R. Ruziev

#### 1. Summary

This Report was created in accordance with contract documents agreed on September 5, 2012, between Vostokstroyinvest LLC., and Daiken Sekkei Inc. It serves as a certificate and written opinion and is based on source materials of the visual inspection of the construction site (conducted on September 8, 2012, including descriptions of the geomorphological or geotechnical properties of the sites); source materials of pit surveys at two points on the premises of the Central District Hospital, and tests and analyses of physical and mechanical properties of the soil; and data on the structures and history of the usage of the buildings on the site. The Report is for detail designing of water towers to be newly constructed as a water supply system for the Central District Hospital.

The purpose of this geological survey is to clarify geo-technological, geological and hydrogeological conditions of the construction site. The survey is compliant with the building standards, and Regulations SNiP 11-02-96 "Engineering Geological Investigations for Construction" and SNiP 11-105-97 "Rules for Engineering Geological Investigations for Construction" and SNiP 11-105-97 "Rules for Engineering Geological Investigations for Construction" and SNiP 11-105-97 "Rules for Engineering Geological Investigations for Construction". The methods of sampling, packing, transporting and storing soils are compliant with the national standard, "GOST 12071-2000". The field surveys on the grounds and laboratory tests were conducted in accordance with the relevant requirements of GOST.

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2	Excavation of 2 survey pits: Pit No. 1 (Sh-1) Pit No. 2 (Sh-2)	September 8, 2012 September 8, 2012
3	Sampling of massive soils at each layer for laboratory analyses	September 8, 2012
4	Laboratory tests, data processing and analyses	September 9, 2012 September 12, 2012
5	Marshaling of the results of the field surveys and laboratory analyses, and creation of the certificate / written opinion (this Report)	September 15, 2012 September 20, 2012

#### 2. Summaries of Surveys and Tests

#### 3. Summary of Geotechnical Conditions of the Premises of Central District Hospital

Jomi District (formerly Kuibyshev District) is located in Khatlon Oblast in the southern area of the Republic of Tajikistan and is approximately 7-8 km away from a sideroad in Uyaly township on on the Dushanbe - Kurgan-Tyube Road, or approximately 75-80 km away from Dushanbe, the capital of the country. The Central District Hospital, built in the 1980s, is sited at the central area of the district.

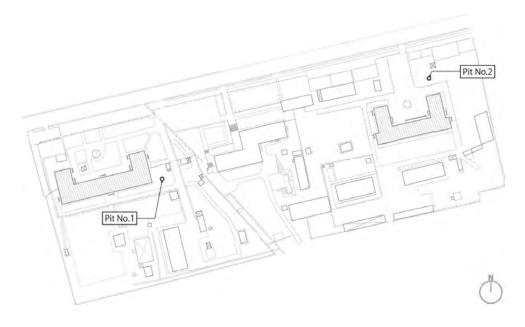
The construction site is geomorphologically classified as valley area; the land is flat and undulates slightly toward southwest. The site has been long irrigated, and chiefly cotton is grown, which requires sprinkling of a large amount of water.

The geological structure of the site mostly consists of sedimentary layers of alluvial and proluvial soils formed in the upper layer in the Fourth period of the geological age, such as fine-grained clay soil. The entire land surface is covered by surface soil of 0.4 - 0.5m in thickness consisting of vegetation and soil. What should be especially noted is

that many years of irrigation and malfunction of drains have been raising the groundwater level. The seasonally-adjusted depth to the ground water level ranges 2.0 - 3.0m. Other than this, beds and lenses, or thin intermediate layers of sandy soil, exist in the area.

#### 4. Physical and Mechanical Properties of the Soil

Two pits were excavated to investigate the properties of the foundation ground on the premises of Jomi Central District Hospital. Pit No. 1 (excavated on September 7, 2012) is at the southwest corner of the obstetric ward near the existing water tower, and Pit No. 2 (excavated on September 8, 2012) is on the premises of the pediatric ward also near the existing water tower. The distance between the pits is approximately 120-150m.



depth	Soil density, t/m <sup>3</sup>	Natural moisture content, %	Moisture content in dried soil	Liquid limit, %	Plastic limit, %	Porosity	Plasticity index, %	Type and state of soil	Excavation depth
1	2	3	4	5	6	7	8	9	10
Sh-1 0,8 м	1,80	22,1	1.47	27,8	19,3	0,84	8,5	Loam	Low plasticity
Sh–1 1,7 м	1,86	25,9	1,48	27,9	19,6	0,82	8,3	Loam	Liquid-like plasticity
Sh–2 1,0 м	1.83	23,6	1,48	28,1	19,5	0,87	8,6	Loam	Low plasticity
Sh–2 1,8 м	1.87	25,2	1.49	27,9	19,2	0,86	8,7	Loam	High plasticity

# 5. Analyses of Data from the Field Surveys and Laboratory Tests

The table clearly shows that the ground on the premises of Jomi Central District Hospital is an accumulation of fine-grained loess and clay soil with plasticity index of 0.08-0.09, classified to loam. Data of the survey on Pit No. 1 show, however, that the soil is nor homogenous but the layers consist of fine-grained or fairly fine-grained sand lenses, or intermediate layer. Moreover, two kinds of clay - that is, cohesive soil that is reddish brown loam, and gray sandy soil - are observed in a sample massive soil of not so large in size ( $0 \ge 0.3 \ge 0.3 = 0.$ 

intermediate layers of sand lenses or sandy soil are also observed below the level of groundwater. The soil at Pit No. 2 has been found to be more homogenous.

The type and properties of the soils are the same at the two pits. The natural moisture fraction of soil is higher at a deeper point: 22-23% at a point of 0.8-1.0m in depth and 25-26% at a point of 1.7-1.8m in depth. The density of dried soil (framework density) is low at 1.47-1.48t/m<sup>3</sup>, showing a low porosity and a low bearing power. The ground on the premises of Jomi Central District Hospital is identical to that of the entire valley area of A. Jomi District and is not prone to subsidence.

According to tables in SNiP 3.02.01-83 "Bases of Buildings and Structures", the standard strength and deformation properties of the ground in question which was formulated in the natural process of deposition can be summarized as follows:

- Cohesion	16 kPa
- Internal frictional angle	16°
- Deformation coefficient	
- Design bearing capacity of soil	

Classification of the ground in terms of the degree of difficulty in leveling of ground is in conformity to Section 33a (loam) of Table 1.1 in SNiP 1V-2 - 82, and thus may vary depending on the types of ground-leveling and machinery equipment to be used. In terms of chemical composition, the soil in question is slightly corrosive to concrete and steels of any kind.

The ground is classified into Type 3 in terms of earthquake-resistant design. The design seismic coefficient of land in Jomi District is seismic intensity of 7 according to SNiP II-7-81 "Construction in Seismic Area". However, seismic intensity of 8 is adopted for the premises of the Central District Hospital in light of the geotechnical conditions (fragile ground condition and high groundwater level).

## 6. Conclusions and Recommendations

1) The grounds on the premises of Jomi Central District Hospital is an accumulation of fine-grained clay soil (cohesive soil) such as loess loam. The layers of reddish brown cohesive soil are formed with lenses or intermediate layers of (finely-grained or fairly finely-grained) gray sand. The soil up to 1.0m in depth bears high plasticity and becomes more liquid at the deeper point. The bearing power is low, and the required bearing power of soil is 150kPa.

2) The level of groundwater around Jomi Central District Hospital is near the ground surface; that is, according to survey data, the levels are 2.1-2.2m in depth at Pit No. 1, and 2.6-2.7m in depth at Pit No. 2. The seasonal fluctuation in the groundwater level ranges possibly between 2.0 and 3.0m.

Attachment 6-3



# РАЁСАТИ МОЛИЯИ НОХИЯИ СИНО

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Японскому агенству международного сотрудничества

Финансовое управление района Сино города Душанбе рассмотрев письмо Родильного дома №3 от 2 января 2013 года №1, гарантирует Вам о том, что для содержания и ремонта медицинского оборудования поставляемого за счет гранта Правительства Японии, в 2014-2020 годах выделение средств будет производиться за счет бюджетных и внебюджетных средств данноро медицинского учреждения.



Ansta

Султонов Ф.К.

(Reference Translation from Russian to English)

Attention: Japan International Cooperation Agency

As for the grant aid assistance from Japanese Government related to the our hospital, we, Maternity Hospital No. 3 in Dushanbe promises to allocate necessary operation and maintenance costs for the planned medical equipment based on the attached details.

4 January 2013 Director Maternity Hospital No. 3 in Dushanbe



ИСПОЛНИТЕЛЬНЫЙ ОРГАН ГОСУДАРСТ ЗЕННОЙ ВЛАСТИ ХАТЛОНСКОЙ ОБЛАСТИ Областная кливическая больница им. б. вахидов

Бохтарский район селсавет Бустоцкальа

тел. 2-30-63

No. 34/507 " 2 5 " 10/ 20/21.

Японскому агенту международного сотрудничества

По реализации Проекта безвозмездной помощи Правительства Японии, главный врач Хатлонской областной больницы гарантирует завершение выравнивание проектной илощадки для установки генератора к концу 2013 года. Главный врач также гарантирует, что расходы для надлежащей эксплуатации и содержания медицинского оборудования, поставляемого в Хатлонской областной большице, будут покрыты бюлжетом. Подробность сметных расчетов расходов приведена в приложении.

Главный врач Хатлонской Областной клинической больницы им. Б. Вохима Пазаров Ф.Н

(Reference Translation from Russian to English)

Attention: Japan International Cooperation Agency

As for the grant aid assistance from Japanese Government related to the our hospital, we, Khatlon Provincial Hospital promises to finish the land preparation and leveling of planned construction site for install the new back-up generator until the end of 2013.

And we Khatlon Provincial Hospital also allocates necessary operation and maintenance costs of the medical equipment and back-up generator based on the attached details.

25 December 2012 Director Khatlon Provincial Hospital

	Название больницы	Ф.г.	2013	2014	2015	2016	2017	2018	2019	2020
1	BKC					······································				
		Подготовка и выравнивание площа дки для устройства ВКС	12,330	-1	-+	-	-	-	-	
	ПРБ Шаартузского района	Содержание ВКС	-	-	2,450	2,450	2,450	2,450	2.450	2,45
	Upper an One of Owners	Подготовка и выравнизание площа дки для устройства ВКС	83,370	-	-	-	-	-		
	ЦРТ района Джоми	Содержание ВКС	-	-	5,770	5,770	5,770	5,770	5,770	5,77(
	Хатлонская областная больница	Подготовка и выравнивание площа дки для устройства генератора	4,700	-	-	-	-	-	-	
	Медицинская аппаратура									
	Родильный дом №3	Эксплуатация и техническое об служивание	-	79,845	159,690	159,690	159,690	159,690	519,690	159,69
2	Хатлонская областная больница	Эксплуатация и техническое об служивание	-	28,870	57,740	57,740	57,740	57,740	177,740	57,74
	Номерные больницы (5 больниц)	Эксплуатация и техническое об служивание		14,550	29,100	29,100	29,100	29,100	29,100	29.10
	Другие расходы, покрываем	Оплата выдачи АР (платежного лоручения)	700	-	-	-	-	-	-	
3	ые Минздравом	Комиссия на выплату вознагра ждения	7,410	28,560	-	+	-	-	-	

# Расходы, которые несет таджикская сторона (единица: Сомони)

Роддом №3	з городе	Душанбе	e
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		Контракт на сервисн	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Заласные част	AND STAN	Расходные мате	риагы		OGUINA WTOP
	Медоборудования	ые услуги Годовые р всхраы (Сомони)	Ксл-во	Наименевание	Единица (Сомони)	Общая сумма (Сомони)	Наименование	Единица (Сомони)	Сбщая сумма (Сомони)	(Сомони)
1	Дефибрияятор	5,000	1	Кабель для пацианта	1,600	1,300	Бумажная регистрационкая лента и др.	2,790	2.790	13,59
2	Система контроля состоятия ващее	6 000	9	Кабель для нацкента	2.500	22,500	Бумажная регистрационная ленла, опо» трод	3,030	27,270	55,77
3	Система контроны состояния ново рожденного	5.000	2	Кабель для надкенть	2,500	\$,000	Бумажная регистрационная пента, ман жета	3,350	6,660	17.66
4	УЗИ сканер	\$,000	2	Ber	Ľ	ú	Гель	001	320	9,32
5	УЗИ сканар (гортативнь й)	6.000	4	Нст	g	۵	Гель	140	560	6.56
S	Кардиотскограф (КТГ)	6.000	3	Кабель для вациента	1,500	4,500	Бумажная рагистрационкая лента, гель	1,540	4,620	15,12
7	Модуль фототерелии	0	2	Нет	a	D	Люмкнесцентная трубка, маска для гла э	770	1 540	1,54
	Кальпоска	0	1	Hei	Q	0	Гелогенная лампа	260	260	25
9	Инфузионный касос	3,500	2	Her	0	0	Инфузионный набор	3,010	2,020	5,52
-	Пинеомат	3,503	*	Нет	0	a	Удвинительная трубка, шариц	2,250	9.040	12.54
1	Инкубатор для жеворежденжых	0	3	Обо реватеь	2,800	a,400	Фкльтр	340	1,020	9,42
2	Бинокупярный микроског	0	2	Het	0	Q	Галогенная лежна, масло	480	960	96(
-	Спеятрофотоматр	300,e	1	Гелокиная памла	500	\$00	Бумажкая регистрационная лента	160	160	9.66
4	_[ентряфуга	0	1	He	D	0	Амлуль для обрыздов	170	170	170
ŝ	Центрифуга (гематкритцая)	D	1	Hes	D	0	Капиллярная трубка	1,600	1,630	1,600
2	NS4 УЗИ скенер:	Необходимо заранее	Deeve	опреть в бюджете средства	на присбретение	ASTYKHOS (60 000	сомони х 2) каждый 5 лет.		Общий итог	159,69

Ne5 УЗИ сканер (портативный):

Необходемо зараное предусмотреть в бюджате средства на приобретение дазчинов (50 000 озмони х 4) каждый 5 лет.

Хаплонская областная больница

	Контракт на сераиси	1. 19 M	Sanac	Расходные мате	Расходные материалы				
Медоборудование	ыз услуги Годовые р асхрды (Сомони)	Коп-ва	Наименование	Единица (Ссмони)	Общая сумыа (Сомони)	Наименование	Единица (Сомони)	Общая сумма (Сомони)	Общий итог (Сомони)
Система контроля состожник новоро жденного	6,005	з	Кабель для нациента	2,500	1,500	Бумажная осгястрационная пента, манж ета	3,350	9,990	23,490
УЗИ скачер	6,000	2	Нет	Ü	0	Геаь	160	320	6,320
Модуль фототералии	0	2	Her	0	0	Люминесцентная трубка , маска для гла з	770	1,540	1,540
	3,500		ller	0	0	Инфузионный набор	1,010	5.050	8,55
Инфузионный васос	0	2	Oborpegatens	1,800	3,600	Фильто	340	680	2,480
Инкубатор для неворожденных Пенератор (А)	12,000	1	Ремень	2,000		Сипатры	1,360	1,360	15,360
N=2 Y3V ckallep	1		котреть в бюдмете средства н	а приобретения	100 001 a0MENTER	сомони х 2) каждый 5 лет.		. Общий итог	57,74

Номерные больницы

Toracian a some made	Контрект на сереиса		39/12	аснью части		Расходные	материалы		Общий итог
Модоборудование	ые услуги Годовые р всходы (Самани)		Наименование	Единице (Сомони)	Общая сумма (Сомони)	Найменование	Единица (Сомони)	• Общая сумма (Сомони)	(Сомони)
Фатальный дополер	0	5	Her	0	0	Гель	60		300
Гонгальный долгаер Генератор (3)	12,000	5	Ремена	2,000	10,000	Фильтр	1,360		28,800
Li Sucherele del	102							Общый итог	29,100

Праменяние

Вызок призедены сметные расходы на экоплуатации и техническое обслуживание. В случае повышания расходок по ходу экоплуатации оборудования, Таджикская сторона будет обеспечивать из надляжаютии образом

Costs covered	by Tajikistan Si	ide (unit: Somoni)
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Hospital	FY	2013	2014	2015	2016	2017	2018	2019	2020
Water Supply and Drainage			- Maria						
	Land preparation and leveling	12,330	7						
Shartuz Central Hospital	Maintenance			2,450	2,450	2,450	2,450	2,450	2,450
Level Constant Hannakal	Land preparation and leveling	83,370	-	-	-	-	-	-	
Jomi Central Hospital	Maintenance	-	-	5,770	5,770	5,770	5,770	5,770	5,770
Khatlon Oblast Hospital	Land preparation and leveling	4,700		÷	-	-	-	-	
Medical Equipment									
Maternity Hospital No. 3	Operation & Maintenance		79,845	159,690	159,690	159,690	159,690	519,690	159,690
Khatlon Oblast Hosptial	Operation & Maintenance		25,710	51,420	51,420	51,420	51,420	171,420	51,420
Number Hospital (5 Facilities)	Operation & Maintenance		14,550	29,100	29,100	29,100	29,100	29,100	29,100
	AP Advising Commissions	700				- 1			
Others (Covered by MOH)	Charges for Payment	7,410	28,560						

Remark: The costs shown above are estimated operation and maintenance expenses. If exceed these estimated costs under ordinary usage of the equipment, it is required for Tajikistan side to secure the costs properly.

#### Maternity Hospital No. 3, Dushanbe

Equipment	Service Contract	Q'ty	1	Spare Parts			Consumables		Total (Smoni)
	Annual (Smoni)		Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)	
Defibrillator	9,000	1	Patient cable	1,800	1,800	Recording paper, etc	2,790	2,790	13,590
Patient Monitor	6,000	9	Patient cable	2,500	22,500	Recording paper, electrode	3,030	27,270	55,770
Neonatal Monitor	6,000	2	Patient cable	2,500		Recording paper, cuf	3,330		17.660
Ultrasound Scanner	9,000	2	Nii	- 0	0	Jel	160	320	9,320
Ultrasound Scanner (Portable)	6,000	4	Nit	0	0	Jet	140	560	6,560
Cardiotocograph (CTG)	6,000	3	patient Cable	1,500	4,500	Recording paper, Jel	1,540	4,620	15,120
Phototherapy Unit	0	_2	Nit	0	0	Fluorscent light, eyemask	770	1,540	1,540
Colposcope	0	1	Nil	0	0	Halogen lamp	260	260	260
Infusion Pump	3,500	2	Nil	0	0	Infusion set	1,010	2,020	5,520
Syringe Pump	3,500	4	Nit	0	0	Extinsion tube, syringe	2,260	9,040	12,540
Infant Incubator	0	3	Heater	2,800	8,400	Filter	340	1,020	9,420
Binoculor Microscope	0	2	Nil	0	0	Halogen lamp, oil	480	960	960
Spectrophotomer	9,000	1	Halogen lamp	500	500	Recording paper.	160	160	9,660
Centrifuge	0	1	Nil	0	0	Test tubes	170	170	170
Centrifuge (Hematcrit)	0	1	Nil	0		Capilary tubes, etc	1,600	1,600	1,600
No.4:Ultrasound Scanner	Cost of the P	robe (	60,000Somonix2pcs)	as a spare part sl	nould allocate ever	y 5 years.		Total	159,690

No.5:Ultrasound Scanner (Portable) Cost of the Probe (60,000Somonix4pcs) as a spare part should allocate every 5 years.

#### Hatton Oblast Hospital

Equipment	Service Contract	Q'ty		Spare Parts	10 - 2		Consumables		Total (Smoni)
	Annual (Smoni)		Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)	
Neonatal Monitor	6,000	3	Patient cable	2,500	7,500	Recording paper, cuf	3,330	9,990	23,490
Ultrasound Scanner	6,000	_ 2	Nil	0	Û	Jel	160	320	6,320
Phototherapy Unit	0	2	Nil	0	0	Fluorscent light, eyemask	770	1,540	1,540
Infusion Pump	3,500	5	Níl	0	0	Infusion set	1,010	5,050	8,550
Infant Incubator	0	2	Heater	1,800	3,600	Filter	340	680	2,480
Generator (A)	12,000	1	Belt	2,000	2,000	Filters	1,360	1,360	15,360
No.2:Ultrasound Scanner	Cost of the P	robe (	30,000Somoni×2pcs)	as a spare part sl	hould allocate even	y 5 years.		Total	57,740

Equipment	Service Contract	Q'ty		Spare Parts			Consumables			
	Annual (Smoni)		Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)		
Fetal Doppler	0	5	Nil	0	0	Jel	60	300	300	
Generator (B)	12,000	5	Belt	2,000	10,000	Filters	1,360	6,800	28,800	

Remark: The costs shown above are estimated operation and maintenance expenses. If exceed these estimated costs under ordinary usage of the equipment, it is required for Tajikistan side to secure the costs properly.



# ЧУМХУРИИ ТОЧИКИСТОН ВИЛОЯТИ ХАТЛОН РАИСИ НОХИЯИ ЧАЛОЛИДДИНИ РУМЙ

735200, похвян Чалолидлини Румй, шахраки С. Исоев, кўчан Тугаланг, 6, тел.: 8 (3247) 4-33-55, факс: 8 (3247) 4-44-55, сомован расчй: www.jaloliddinirumi.tj. суроган зясктронй: info@jaloliddinirumi.tj

5 as « 24 » 12 солн 2012

> Ба гурухи кории ташкилоти «Чайка»

Макомоти инроияи хокимияти давлатии похияи Чалолиддини Румй барои хамкорихои пайваста ба Шумо миннатдорй баён намуда, омодагии худро бобати нигохдорй ва истифодабарии максадноки асбобхои тиббие. КИ ба беморхонахои нохия пешниход менамосд, тасдик мекунад.

Дар соли 2014 маблаги 10620 сомони чудо гардида. минбаъд низ дар сурати зарурат доштан аз бучети махаллй маблағи зарурй барои 21 номгуи асбобхо – миз барои муоина, кати функсионалй барои зоиш, термометр, стетофонендоскоп бо куббачахои дутарафа, сфигмоманометр-анероид, чароғаки тиббй, тарозуи механики барои калонсолон, кадченкунак барои навзодон, кадченкунак, кати статсионарй, кювез (барои павзодон), термометри хонагй, штатив барои чаконидан ба дохили рагхои варид (барои 4 доручаконак), каталка, фестали допплери, мачмуи асбобхо барои кабули зоиш, тамъизкунак, мачмуи асбобхо барои гузаропидани эхъёгарии ибтидони навзодон, мачмуи асбобхо барои эхъёгарии кудакон ва генератор чудо карда мешавал.

Бо камоли эхтиром,

Раиси нохияи Чалолиддини Румй

Пецении А. Холов

# REPUBLIC OF TAJIKISTAN KHATLON REGION THE GOVERNER OF JALOLIDDINI RUMI DISTRICT

Jaholiddini Rumi district 735200, administrative center S. Isoev, Tugalang 6 str., Tel: 8 (3247) 4-33-55/ Fax: 8 (3247) 4-44-55/ Web page: www.jaholiddinirume.t/E-mail: infor@jakoliddinirumti Ij

Outgoing number # 1/995 Date: 24.12.2012

Addressee: The working Group of JICA

Executive board of governmental authority of Jaloliddini Rumi district expresses gratitude for your cooperation and affirms its preparedness in respect of maintenance and designated usage of medical equipment being offered by you to hospitals of the district.

For the year of 2014 an amount of 10.620TJS has been allocated and henceforth required amount will upon condition of necessity be allocated from the local budget for 21 items of equipment:

	1.	Gynecological Examination Table
	2.	Bed for Delivery Use
	3.	Clinical Thermometer
	4.	Stethoscope (Double Head)
	5.	Sphygmomanometer (Aneroid type)
	б.	Examination Light
	7.	Weighting Scale (for Adult)
	8.	Baby Scale (for Infant)
	9.	Height Scale (for Infant)
Ĩ	10.	Height Scale (for Pediatric to Adult)
	П.	Patient Bed (for Adult)

<ol> <li>Cot (for Neonate)</li> <li>Room Temperature Meter</li> <li>IV Pole Stand</li> <li>Instrument Trolley</li> <li>Fetal Doppler, Mannual</li> <li>Delivery Instrument Set</li> <li>Hot Air Sterilizer</li> <li>Emergency Kit (for Newborn)</li> </ol>	_	the said the state of the said of the
<ol> <li>IV Pole Stand</li> <li>Instrument Trolley</li> <li>Fetal Doppler, Mannual</li> <li>Delivery Instrument Set</li> <li>Hot Air Sterilizer</li> </ol>	12.	Cot (for Neonate)
<ol> <li>15. Instrument Trolley</li> <li>16. Fetal Doppler, Mannual</li> <li>17. Delivery Instrument Set</li> <li>18. Hot Air Sterilizer</li> </ol>	13.	Room Temperature Meter
<ol> <li>Fetal Doppler, Mannual</li> <li>Delivery Instrument Set</li> <li>Hot Air Sterilizer</li> </ol>	14.	IV Pole Stand
<ol> <li>Delivery Instrument Set</li> <li>Hot Air Sterilizer</li> </ol>	15.	Instrument Trolley
18. Hot Air Sterilizer	16.	Fetal Doppler, Mannual
	17.	Delivery Instrument Set
D. Emanually Vit (For Nawborn)	18.	Hot Air Sterilizer
ry. Energency Ku (for Newborn)	19.	Emergency Kit (for Newborn)
20. Emergency Kil (for Pediatric)	20.	Emergency Kit (for Pediatric)
21. Generator (A)	21.	Generator (A)

Yours faithfully,

The governor of J. Rumi district Mr. Kholov A.

BASOPARY MANAPPERTAN SEND ANTONIA CONST UCING ANTONIA CONST SEND ANTONIA MARKANIA SOUTH ANTONIA CONTRACT CONTRACTOR MINTER CONTRACTOR

NOGO KJ50 12: 2012

Но реализации Проекта безнозмездной помощи Правительства Японии, главный врач Центральной районной больницы района Джоми гарантируст завершение выравнивания проектной илощадки для устройства водопроводно-канализационной системы к концу 2013 года и бюджетное обеспечение расходов на содержание водопроводно-канализационной системы, возникающих после 2015 финансового года. Главный врач также гарантируст, что расходы на надлежащей эксплуатании и содержание медицинского оборудования и генератора, поставляемого в номерных больницах. №1 (Мехнат) и №3 (Курбонов), находящихся под управлением ЦРБ, будут покрыты бюджетом. Подробность сметных расчетов расходов приведена в приложения.

Декабря 2012 г. Гланный зрат ЦРБ района Джоми 7. -----KALDEN

(Reference Translation from Russian to English)

Attention: Japan International Cooperation Agency

As for the grant aid assistance from Japanese Government related to the our hospital, we, Jomi Central District Hospital promises to finish the land preparation and leveling of planned construction site until the end of 2013, as well as to secure the maintenance budget which is required to be allocate from the year of 2015.

And we Jomi Hospital also allocates necessary operation and maintenance costs of the medical equipment and back-up generators for the number hospitals (Mehnat and Kurbonov) which are administrated by the district government.

25 December 2012 Director Jomi Central District Hospital

	Название больницы	Ф.г.	2013	2014	2015	2016	2017	2018	2019	2020
	ВКС		and the state of the						-	
	ЦРБ Шаартузского района	Подготовка и выравнивание площа Дки для устройства ВКС	12,330	-	-	-	-	-		
1	цго шаартузского района	Содержание ВКС	4	-	2,450	2,450	2,450	2,450	2,450	2,450
	ЦРТ района Джоми	Подготовка и выравнивание площа дки для устройства ВКС	83,370	-	-	-	-		-	-
	на и рамона джоми	Содержание ВКС	-	-	5,770	5,770	5,770	5,770	5,770	5,770
	Хатлонская областная больница	Подготовка и зыразнизание площа дки для устройства генератора	4,700	-	-	-	-	-	-	
	Медицинская аппаратура									
~	Родильный дом №3	Эксплуатация и техническое об спуживание	-	79,845	159,690	159,690	159,690	159,690	519,690	159,690
2	Хатлонская областная больница	Эксплуатация и техническое об служивание	-	28,870	57,740	57,740	57,740	57,740	177,740	57,740
	Номерные больницы (5 больниц)	Эксплуатация и техническое об служивание	-	14,550	29,100	29,100	29,100	29,100	29,100	29,100
2	Другие расходы, покрываем	Оплата выдачи АР (платежного поручения)	700	-	-	-	-	-	-	-
3	ые Минздравом	Комиссия на выплату вознагра ждения	7,410	28,560	-	-	-		-	-

# Расходы, которые несет таджикская сторона (единица: Сомони)

Роддом	Nº3	в городе	Душанбе
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		Контракт на серзисн		4	Запасные части		Расходные мате	общий итог		
	МедоБорудование	ыя успуги Годорые ф аскрды (Сомони)	Коп-во	Наименование	Едилица (Сомони)	Общал сумма (Срмони)	Наимонсеание	Едигмер (Срмони)	Общая сумма. (Сомони)	(Самона)
1	Дефибрилетор	9,000	1	Кабель для пационта	1,800	1,800	Бумажная регистрационная лента и др.	2,790	2,790	13,590
2	Система контроля состояния пацие н°8	6,00D	5	Кабель для нациента	2,500	22,500	Бумажная репистрацисникая лентя, элек трод	2,530	27,270	55,270
3	на Система контроля состояния ново рожденного	6,000	2	Кабель для вациента	2,500	5,000	Бумажная регустрационная лента ман жата	3,330	6,560	17,660
	узи скагер	S 200	2	Her	a	0	Tene	160	320	9.320
-	УЗИ сканер (портативным)	6,000	4	r) 67	Ø	0	Гель	140	56D	6.580
	Кардиотокограф (КТГ)	6,000	3	Къбель для падианта	1,500	4,606	Бумажная регистрационная лента тель	1,540	4,820	15,120
7	Модуль фототералии		2	Her	C	G	Люминесцентная трубка, макка для гла	770	1,640	1.540
				Her	6	â	балогенная дамяв	260	260	250
8	Кольпосков	3,500		llet	0	C	Инфузионный набор	1,010	2,025	5,520
10	Инфузионный насос Линеомат	2,500	4	Her	0	0	Удлянительная трубка, шарец	2,260	₹,045	12,540
27	Инкубатор для новорожденных		3	Coorpegates	2,860	B,≏00	Фильтр	340	1,020	9,420
11	Бинокупярный митроской		2	lier	0	D	Гапогенкая лампа, масло	480	560	960
	Спектосфатрметр	9,000	1 7	Гелолечная памла	500	500	Бумажная репистрационная лента	160	*60	9,660
12			1	Нат		0	Ампуль для сбразцов	170	17d	170
	Центрифуга		-	Нат	0	a	Калиллеркая трудка	1,500	1,600	1.600
33	Центрифу:а (гематкритная) N94 УЗИ сканер.		1 .			н н датыкасэ (60.00)	3 срыхни х 2) каждый 5 лет.		Общий итог	159,660

Кеб УЗИ сканер (портативный)

Необходимо экранее предусмотрать в бюджете средства на приобратение далчное (60 000 сомони х 4) каждый 5 лет.

Хатвочская областная больница

Хонтракт на селенси		~ 3anao	сные части		Расходные мате	1.1	Общий итог	
	Kon-Ba	Наименование	Единица (Сомони)	Общая сумма (Сомони)	Наименование	Единица (Сомони)	Общая сумма (Сомони)	(Команк)
6,000	3	Кабель для вациента	2,500	1 7.580		3,335	9,990	23,490
5 000	2	Her	0	D	Гель	160	320	6,320
B.466			Q	0	Поми весцентная трубка, маска для из	770	1,540	1,540
1.600		Het	E E	0	инфузисниый набор	1,010	5,050	B,550
		()Somenate/h	1 E 30	3,600	֎κղչոր	340	580	2.480
12 008	1	Pencila				1,360		15.360
a laboration and a	асхрды (Ссмони) 6,000 6,000 0 0 2,500 0 12,000	ыв услуги Годовые р асхрды (Ссмони) 6,000 3 6,000 2 0 2 3,500 5 0 2 12,000 1	Колера се	ыв услуги Годовье р асхуды (Ссмочи) Кол-во 6,000 3 Кабель для кашиента 2,500 5,000 2 Нет 0 0 2 Пет 0 3,500 5 Нет 0 0 2 Сботреватель 1,500 12,000 1 Ремонь 2,000	Кол-во         Кол-во         Рдиница         Общая сумиа           асходы (Семони)         Кол-во         Наименование         (Сомони)         (Сомони)           6,000         3         Кабель для кациента         2,500         7,500           5,000         2         Нег         0         0         0           0         2         Нег         0         0         0           3,500         5         нет         0         0         0           0         2         Пет         0         0         0           1,500         5         нет         0         0         0           1,200         1         Ремень         2,000         2,000         2,000	Колтракт на серемси ва услуги Годовье р асхуды (Сомони)         Кол-во Наименование         Единица (Сомони)         Общая сумма (Сомони)         Наименование           6,000         3         Кабель для нациента         2,500         7,500         Бумажная регистрециотная лекта, манж ега           6,000         2         Нег         0         b         Гель           0         2         Нег         0         b         Гель           3,500         5         нет         0         0         Полжи набор           3,500         5         нет         0         0         Инфузисяный набор           0         2         Общеватель         1,500         3,600         булатная таубка, часка для гла	Колнал         Колнал         Колнал         Наименование         Единица (Сомони)         Общая сумма (Сомони)         Наименование         Единица (Сомони)           6,000         3         Кабель для кашиента         2,500         7,500         Бумаккая регистреционная лекта, маня         3,330           6,000         2         Нег         0         0         Б лек         160           0         2         Нег         0         0         В лек         160           3         2         Пел         0         0         Вами весценити ав трубка, маска для гля         770           3         2         Нег         0         0         Инстрансина трубка, маска для гля         770           3         2         Нег         0         0         Инстрансина трубка, маска для гля         340           12         2         Обтревалелен         2,000         Зиклатры         1,360	Котракт на серения ва услуги Годовер р аскрды (Ссмони)         Наименование         Единица (Сомони)         Общая сумма (Сомони)         Наименование         Единица (Сомони)         Общая сумма (Сомони)           6,000         3         Кабель для вашиента         2,500         7,500         Бумонкшая регистрационная лекта, манж ета         3,330         9,890           6,000         2         Нег         0         0         Гель         150         3220           0         2         Нег         0         0         Гель         150         320           3,500         5         Нет         0         0         Инсузионный кабер         1,010         5,050           3,500         5         Нет         0         0         Инсузионный кабер         1,010         5,050           12,020         1         Ремень         2,000         Зимптры         1,360         1,360

N22 УЗИ скалер:

Песбходимо заранее предусмотроть в быджете средства на приобр

Бомерные больницы

Iowiep Able Contractor		1	3ane	спые части		Facxoge		OGULAR INTOF	
Медоборудование	Контракт на сервисн ше услуги Годовке р асходы (Сомони)		Панменование	Единица (Сомони)	Общая сумма (Сомоня)	Наименование	Единица (Сомони)	Общая сумиа (Сомони)	(Comora)
	acked bi to mentally	- unor	10 cm	0	C	Гель	50	100	30
1 фетальный долло≃р	4. 		liet November	2,500	10.000	Скалтр	1,350	6,800	
2 Гекератор (8)	12 000	5	Ремень		(			ODULINIÓ NTOF	29,10

Зыще преведены сметные расходы на экоплуатации и техническое обслуживание. В случае порышения расходов по ходу экоплуатации оборудования. Таджинская сторона будет обеспечивать их надлежищим обрезом

	Hospital	F	Y 2013	2014	2015	2016	2017	2018	2019	2020			
	Water Supply and Drainage												
	Shortuz Control Hospital	Land preparation and leveling	12,330										
4	ihartuz Central Hospital	Maintenance			2,450	2,450	2,450	2,450	2,450	2,450			
1	Lami Castral Haspitol	Land preparation and leveling	83,370	-	-	e e	-	1	-	11			
	Jomi Central Hospital	Maintenance	-		5,770	5,770	5,770	5,770	5,770	5,770			
	Khatlon Oblast Hospital	Land preparation and leveling	4,700	-	-	~	-	-					
	Medical Equipment												
~	Maternity Hospital No. 3	Operation & Maintenance		79,845	159,690	159,690	159,690	159,690	519,690	159,690			
2	Khatlon Oblast Hosptial	Operation & Maintenance		25,710	51,420	51,420	51,420	51,420	171,420	51,420			
	Number Hospital (5 Facilities)	Operation & Maintenance		14,550	29,100	29,100	29,100	29,100	29,100	29,100			
		AP Advising Commissions	700										
3	Others (Covered by MOH)	Charges for Payment	7,410	28,560			-						

# Costs covered by Tajikistan Side (unit: Somoni)

Remark: The costs shown above are estimated operation and maintenance expenses. If exceed these estimated costs under ordinary usage of the equipment, it is required for Tajikistan side to secure the costs properly.

#### Maternity Hospital No. 3, Dushanbe

Equipment	Service Contract	Q'ty		Spare Parts		1	Consumables		Total (Smoni)
	Annual (Smoni)	100	Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)	Second Second
Defibrillator	9,000	1	Patient cable	1,800	1,800	Recording paper, etc	2,790	2,790	13,590
Patient Monitor	6,000	9	Patient cable	2,500	22,500	Recording paper, electrode	3,030	27,270	55,770
Neonatal Monitor	6,000	2	Patient cable	2,500	5,000	Recording paper, cuf	3,330	6,660	17,660
Ultrasound Scanner	9,000	2	Nil	0	0	Jel	160	320	9,320
Ultrasound Scanner (Portable)	6,000	4	Nil	0	D	Jel	140	560	6,560
Cardiotocograph (CTG)	6,000	3	patient Cable	1,500	4,500	Recording paper, Jel	1,540	4,620	15,120
Phototherapy Unit	0	2	Nil	0	0	Fluorscent light, eyemask	770	1,540	1.540
Colposcope	0	1	Nil	0	0	Halogen lamp	260	260	260
Infusion Pump	3,500	_ 2	Nil	0	0	Infusion set	1,010	2,020	5,520
Syringe Pump	3,500	4	Nil	0	0	Extnsion tube, syringe	2,260	9,040	12,540
Infant Incubator	0	3	Heater	2,800	8,400	Filter	340	1,020	9,420
Binoculor Microscope	0	2	Nil	0	0	Halogen lamp, oil	480	960	960
Spectrophotomer	9,000	1	Halogen lamp	500	500	Recording paper,	160	160	9,660
Centrifuge	0	1	Nil	0	0	Test tubes	170	170	170
Centrifuge (Hematcrit)	0	1	Nil	0	0	Capilary tubes, etc	1,600	1,600	1,600
No.4:Ultrasound Scanner	Cost of the Pr	robe (i	50,000Somonix2pcs)	as a spare part si	hould allocate even	y 5 years.		Total	159,690

No.5:Ultrasound Scanner (Portable) Cost of the Probe (60,000Somonix4pcs) as a spare part should allocate every 5 years.

#### Hatlon Oblast Hospital

Equipment	Service Contract	Q'ty		Spare Parts		the the second of the	Consumables		Total (Smoni)
	Annual (Smoni)		Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)	
Neonatal Monitor	6.000	3	Patient cable	2,500	7,500	Recording paper, cuf	3,330	9,990	23,490
Ultrasound Scanner	6,000	2	Nil	0	0	Jel	160	320	6,320
Phototherapy Unit	0	2	Nil	0	0	Fluorscent light, eyemask	770	1,540	1.540
Infusion Pump	3,500	5	Nil	0	0	Infusion set	1,010	5,050	8,550
Infant Incubator	0	2	Heater	1,800	3,600	Filter	340	680	2,480
Generator (A)	12,000	1	Belt	2,000	2,000	Filters	1,360	1,360	15,360
No.2:Ultrasound Scanner	Cost of the P	robe (I	60,000Somoni×2pcs)	as a spare part s	hould allocate ever	y 5 years.		Total	57,740

#### Number Hospitals

Equipment	Service Contract	Q'ty			Spare Parts	1. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 - X _ Y	Consumables		Total (Smoni)
	Annual (Smoni)			Name	Unit (Smoni)	Amount (Smoni)	Name	Unit (Smoni)	Amount (Smoni)	a service a service of
Fetal Doppler	0	5	Nil		Û	۵	lel	60	300	300
Generator (B)	12,000	5	Belt		2,000	10,000	Filters	1,360	6,800	28,800
Condition (= )		_							Total	29,100

Remark: The costs shown above are estimated operation and maintenance expenses. If exceed these estimated costs under ordinary usage of the equipment, it is required for Tajikistan side to secure the costs properly.