MINISTRY OF HEALTH
OF UKRAINE

No.

BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR
IMPROVEMENT OF MEDICAL EQUIPMENT
IN THE UKRAINIAN CHILDREN 'S
SPECIALIZED HOSPITAL "OKHMATDET"
IN
UKRAINE

JULY, 2000

JAPAN INTERNATIONAL COOPERATION AGENCY

INTERNATIONAL TECHNO CENTER CO., LTD.

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PREFACE

In response to a request from the Government of Ukraine, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Medical Equipment in the Ukrainian Children's Specialized Hospital "OKHMATDET" and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Ukraine a study team from February 7 to March 12, 2000.

The team held discussions with the officials concerned of the Government of Ukraine, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Ukraine in order to discuss a draft basic design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of Ukraine for their close cooperation extended to the teams.

July, 2000

Kimio Fujita
President
Japan International Cooperation Agency

July, 2000

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of Medical Equipment in the Ukrainian Children's Specialized Hospital "OKHMATDET" in Ukraine.

This study was conducted by International Techno Center Co., Ltd., under a contract to JICA, during the period from January 24, 2000 to August 25, 2000. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Ukraine and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

Kazuhiro ABE
Project Manager,
Basic design study team on the Project for Improvement of Medical Equipment in the Ukrainian Specialized Children Hospital "OHMATDYT"
International Techno Center Co., Ltd.


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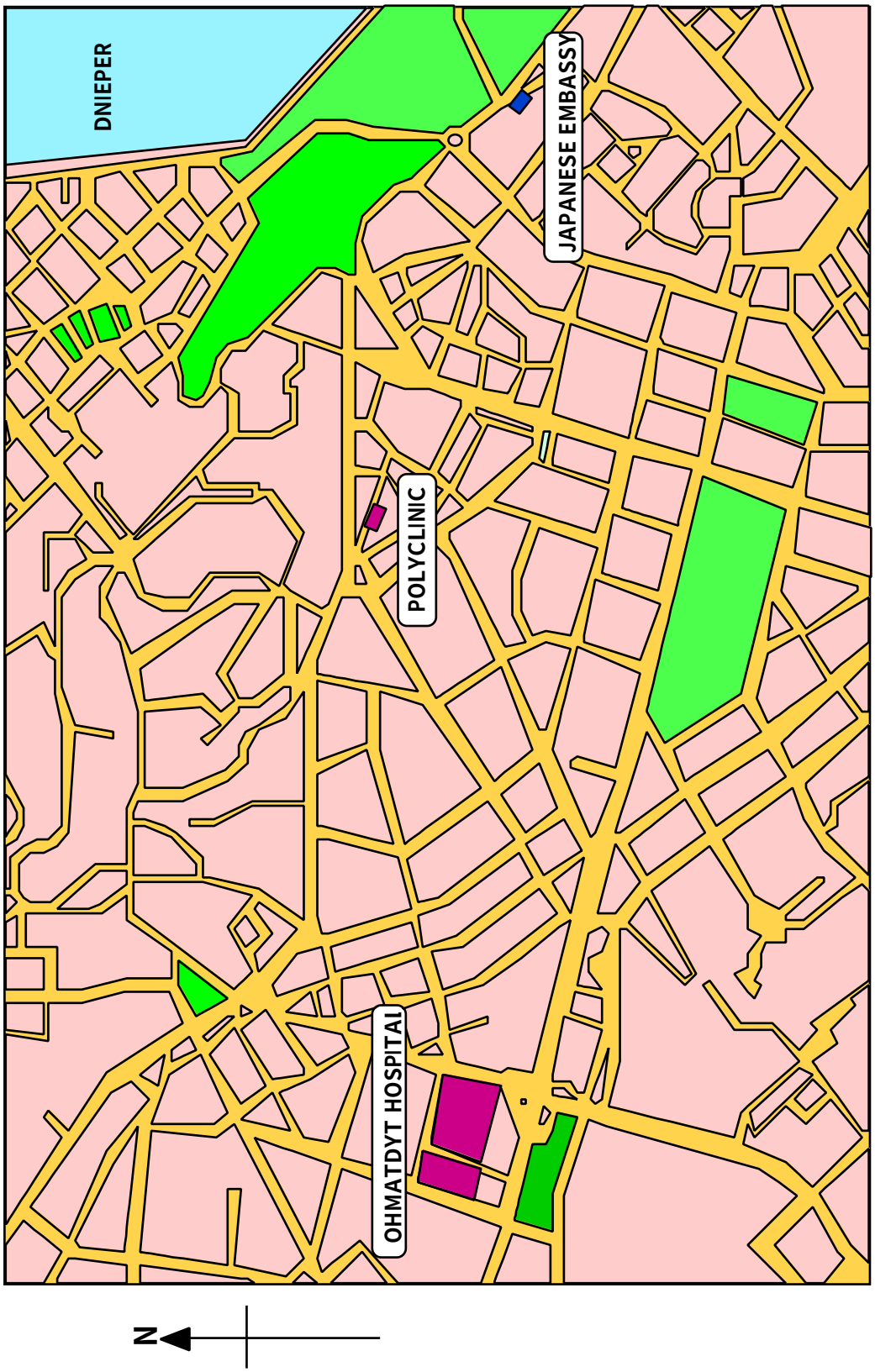
UKRAINE

LOCATION MAP (KIEV CITY)



Abbreviations

A/P	Authorization to Pay
B/A	Banking Arrangement
ECG	Electrocardiogram
E/N	Exchange of Notes
EU	European Union
GDP	Gross Domestic Product
ICU	Intensive Care Unit
IMF	International Monetary Union
NATO	North Atlantic Treaty Organization
NGO	Non Government Organization
OECD	Organization for Economic Cooperation and Development
ODA	Official Development Assistance
O/M	Operation and Maintenance
PHC	Primary Health Care
STF	Systematic Transformation Facilty
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

BASIC DESIGN STUDY ON THE PROJECT
FOR
THE IMPROVEMENT OF MEDICAL EQUIPMENT FOR IN THE UKRAINIAN CHILDREN'S SPECIALIZED HOSPITAL "OKHMATDET"
IN UKRAINE

CONTENTS

Chapter 1 Background of the Project

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1-1 Background of the Project

The Republic of the Ukraine joined the Union of Soviet Socialist Republics in December 1922, and subsequently played a supporting role to the Soviet Union both economically and in human resources, as the second largest republic in the union after Russia. Following the height of the Soviet Union's period of perestroika in 1990, however, Ukraine declared its independence on August 24, 1991, and in December of that year Russia acknowledged Ukraine's independence. With the dissolution of the USSR, Ukraine became an independent country in its own right.

Immediately after gaining its independence, however, the collapse of the former Soviet Union's specialized industrial system resulted in problems such as insufficient supplies of raw materials and liberalization of energy prices in Russia, provoking sudden inflation that exceeded 10,000% in 1993. Subsequently, in a cooperative effort with the IMF and other international financial organizations, the country initiated a shift to a market economy, and stabilized an inflation in 1995. How ever, its economic growth still stays negative.

In September 1996, the new "Hryvnia" currency was introduced, but following that move, there were delays in economic reforms in the microeconomic level, such as privatization and industrial restructuring. In addition, economic reforms that took place brought new problems, such as unpaid wages and pensions, which in return caused a widespread delay in economic reforms. Furthermore, in 1998 the country was sharply hit by a slump in international financial markets, a dwindling of foreign money reserves caused by the repayment of swelling external debt became a severe problem. The balance of payment desequilibrium, especially due to a large payment for imported energy, also became a severe problem. In 1998, Ukraine's economic growth rate was –1.7%.

Because of this economic crisis, in 1996 63% of the country's citizens had a per capita income below the poverty line, and the percentage of income spent for food had risen from 57% in 1995 to 61.3% in 1996. Commodities such as meat, milk, eggs, vegetables, and fruits became difficult to obtain, causing severe problems in the nutritional status of the people.

In terms of the population of Ukraine, the number of death exceeded the number of birth by 39,000 for the first time in 1991 and peaked in 1992. The population of Ukraine declined to 450,000 between 1994 and 1997, and the population declined by 1.7 million, from 52.2 million to 50.5 million between 1993 and 1998 (of this figure, 77.3% was caused by a

decline in population and 22.7% was caused by migration). The average life expectancy also declined between 1989 and 1995 by 4.9 years for males and 2.6 years for females. As a background to this decline in the average life expectancy for males, there is a tendency towards earlier deaths for males (three times as many males as females die in traffic accidents, from poisoning, and suicide). In 1989, the rate of death was between 2.8 and 3.8 times higher for males in the age range of 20 to 80 years (this figure rose to four times for males between the ages of 30 and 34). In 1989 there was a difference of 9 years between the average life expectancy at birth for males and that for females (66.2 years for males and 75.2 years for females). By 1996 this gap had widened to 11.2 years (61.6 years for males and 72.8 years for females). Looking at population figures by age group, in a comparison of figures for 1996 and 1998, the percentage of the population aged 65 years and above rose from 22.6% to 23.2% during that period, while the percentage of the population aged 0 to 14 years declined from 21.5% to 2.07%.

In the field of pediatric health care, the primary causes of death among infants are traffic accidents, poisoning, and trauma. In 1996, these accounted for 27.7% of the overall infant mortality. As the cause of morbidity, the respiratory infection comes in first, followed by infectious diseases. Between 1991 to 1996, the incidence of diseases of infant was increased 21.3% form 1,415.1 to 1,716.9 per 1,000 population. Perinatal diseases, congenital anomalies, and respiratory infections account for an extremely high percentage of neonatal death.

As a result, Ukraine is putting a high priority on the issue of strengthening infant and pediatric medical care services, including emergency care for pediatric patients, such as for infants less than one year of age, and in pediatric patients involved in traffic accidents and other mishaps.

In this circumstance, in the presidential election held on November 14, 1999, incumbent president Leonid Kuchma, who is working towards a free economy, based on cooperative relations with the IMF, NATO, the EU, and other organizations, defeated his Communist party opponent and was re-elected. This is possibly happened because the people of the Ukraine are hoping to see a market economy such as neighboring Eastern European countries recently joining to EU, and are rejecting a return to the previous era of the Soviet Union, even though they face with severe economic conditions.

However, the economy continues to decline, and health care and medical institutions and systems are suffering financially because of cutbacks in expenditures in the national budget. Operating budgets for medical institutions in Ukraine are being reduced, and there is insufficient funding in general, and particularly for renovating and replacing aging equipment.

1-2 Outline of the Request

1) Objectives

The Ukrainian Children's Specialized Hospital "OKHMATDET" which is the facility targeted by this project, is ranked as a tertiary medical institution which accommodates infant and pediatric patients, and also serves as an emergency center for infant and pediatric patients, located on the west side of the capital city of Kiev. As a top referral hospital for infant and pediatric care, the hospital also plays a crucial role in the solution of issues in infant and pediatric care currently being addressed by Ukraine. Because of the worsening financial situation for health care and medical institutions caused by the economic crisis, however, the operating budget allocated to this facility is being reduced.

Under the restricted situation of financial resource for the health care and medical institutions, the hospital is cutting back on the number of beds available and the number of employees, and is initiating various other administrative reforms. However, the hospital is unable to allocate sufficient funding to upgrade and replace obsolete equipment and to supplement insufficient quantities of equipment. This poses a significant obstacle to medical care activities at the facility, and a request was made to Japan for assistance in recovering the essential functions of the hospital.

2) Executing Agency

The executing agency of this project is the Ukrainian Children's Specialized Hospital "OKHMATDET", which operates under the jurisdiction of the Ministry of Health of Ukraine. The hospital consists of a main complex including the inpatient buildings, and an outpatient department (polyclinic) located approximately three kilometers away from the main complex.

3) Departments to be improved on this Project

Targeted departments of the project are the surgical wards with the operating rooms, ICU, Department of Poisoning and Hemodialysis, Gynecology, Neonatal wards, the Onco-Haematology Centre, the Section of Imaging and Functional Diagnosis, the Central Laboratory and the Bacteriology Laboratory, the Center of Medical Genetics, Physiotherapy, the Laundry, and the CSSD in the main complex, and the Outpatient Department (Polyclinic).

4) Contents of the Request

The primary materials covered by the request are as follows.

Department	Description
Laboratory	Microscope Autoclave Electrolyte Analyzer Biochemical Analyzer
Surgical Operation Theater	Operating Table Anesthetic Apparatus X-Ray Unit (C-arm) Operating Monitor
Functional Diagnostic	ECG（6-ch） Diagnostic X-Ray System CT Scanner Ultrasonic Scanner
Neonatolagy	Incubator Suction Unit Neonatal Monitor Ventilator
ICU	Central Monitor System (8 beds) Ventilator Defibrillator
Physiotherapy	Low Frequency Therapy Unit Microwave Therapy Unit Ultraviolet Lamp
Outpatient	Diagnostic Set Examination Table Examination Light Ultrasonic Neblizer Autoclave
Laundry / CSSD	Sterilizer (Hot air) Autoclave laundry Machine Drying Machine
Cytogenetics Laboratry	Microscope Cariotyping System CO2 Incubator
Hemodialysis	Hemodialysis Apparatus Peritoneal Dialysis Apparatus Water Treatment System

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Objectives of the Project

Following Ukraine's withdrawal from the former Soviet Union, the Ministry of Health of Ukraine has been strengthening the primary health care system, with the objective of maintaining equitable medical care services for the population and guaranteeing the people's right to medical care. Since 1996, as a result of a presidential directive, the strengthening of infant and pediatric medical care services has come an especially high priority.

Because the policy of free medical care as part of the country's medical care services has been in effect since the former Soviet Union regime, and is still governed by Article 49 of the Constitution, there is no income to medical care facilities in Ukraine. And the sharply inflation since its independence and overall decrease in the budget for health sector limit to upgrade or supplement deteriorating equipment at medical care facilities. As a result, medical care facilities are unable to function appropriately as medical services providers.

Given these circumstances, the funds for purchasing new equipment have also decreased significantly at the Ukrainian Children's Specialized Hospital "OKHMATDET", which is ranked as Ukraine's top referral hospital, and equipment necessary for medical treatment has deteriorated to a noticeable degree, bringing some medical care activities to a halt altogether. The objective of implementing this project is to restore and strengthen the functions of this facility as a top referral hospital in the field of pediatric care.

2-2 Basic Concept of the Project

The implementation of this project is intended to restore and strengthen the functions of the Ukrainian Children's Specialized Hospital "OKHMATDET", Ukraine's top referral hospital in the field of pediatric care, in four vital areas.

High-level medical cares: As a tertiary hospital, the hospital treats seriously ill pediatric patients with critical diseases and incurable diseases. Treatment procedures include sophisticated surgical interventions such as excisions of pediatric malignant tumors and reconstruction of anomalous organs, as well as dialysis of patients with renal failure, blood purification of patients with autoimmune diseases or poisoning and care for premature babies, which are not available at other institutions (Figure 2-1).

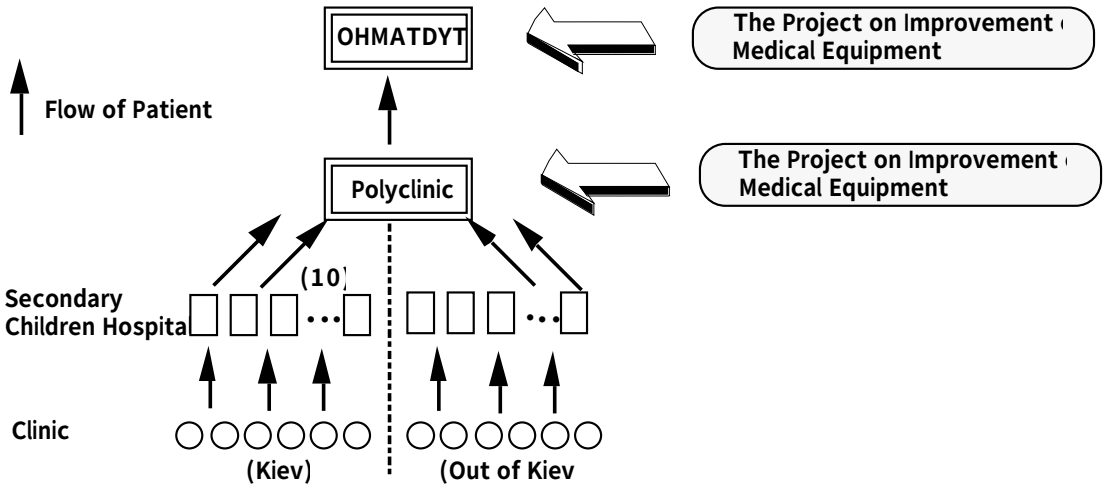

Fig. 2-1. Functions as a tertiary medical facility

Emergency centre: As an emergency medical facility overseeing the city of Kiev located on the western shore of the Dnieper River and a broad area around Kiev, the hospital accepts over 6,000 pediatric emergency cases per year, without regardless to the level of their severity (Figure 2-2).

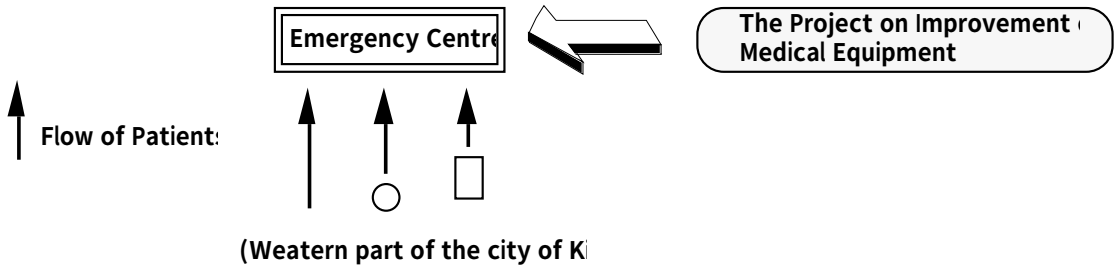

Fig. 2-2. Functions as an emergency center for western Kiev

Referral laboratory: The hospital processes samples from the entire surrounding area for purposes such as drug sensitivity tests on isolated bacteria, identification of pathogenic viruses, hormonal assays, immunological tests, mass-screening tests of newborns, chromosomal examination (karyotyping), and other special laboratory tests. These test results are used to assist in diagnoses (Figure 3-3).

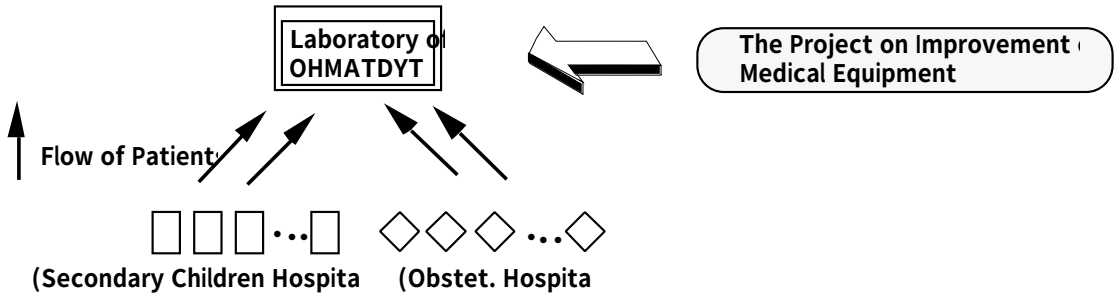

Fig. 2-3. Functions as a nuclear center of clinical testing

Educational hospital for specialists: Working in cooperation with the Medical School of Kiev University, the hospital provides training for students and postgraduates studying to become pediatricians and specialists in other fields, such as pediatric surgery and pediatric orthopaediacs.

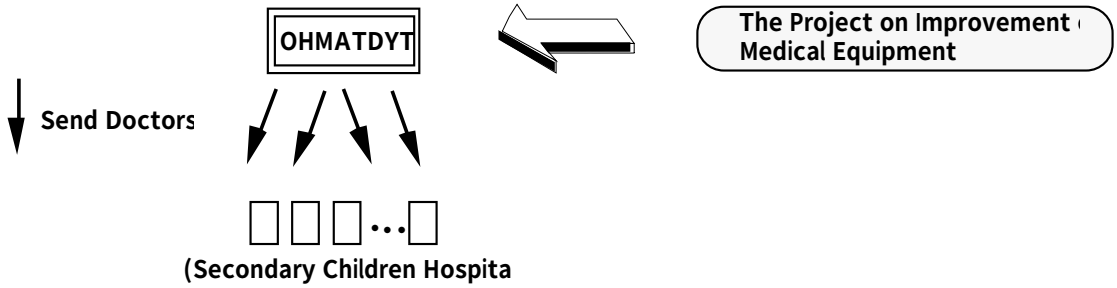

Fig. 2-4. Functions as a training institute for physicians in specialized fields

As a result of the study described above, this project will achieve the refurbishing of medical equipment at the Ukrainian Children's Specialized Hospital "OKHMATDET", targeting the following divisions:

1) the central laboratory and the bacteriology laboratory,
2) the surgical wards including the operating theatre,
3) the section of imaging and functional diagnosis,
4) the neonatal wards,
5) the surgical ICU,
6) the physiotherapy,
7)the outpatient department(polyclinic), and
8) the centre of medical genetics.

Planning for the contents of equipment for the various divisions encompasses the basic approach outlined below.

- The range of diagnostic activities appropriate for the nation's top referral hospital has been taken into consideration.
- Of the equipment currently in use, those items that have deteriorated or are inadequate will be replaced or supplemented, in order to improve diagnosis and treatment capabilities, and also to reduce the maintenance budget.
- New equipment will also be included in the scope of the planning, as long as it is indispensable and appropriate to the functioning of the hospital, and is within the technical level of the hospital.

2-3 Basic Design

2-3-1 Design concept

(1) Policy concerning the maintenance and management capabilities of the executing agency

Both officials at the Ministry of Health and representatives of the Ukrainian Children's Specialized Hospital "OKHMATDET" are well aware of the situation and demonstrate a cooperative stance to Japanese side. It is hoped that both the administrative organizations and individuals implementing the project in Ukraine will continue to work actively to make the project a success.

In introducing equipment, maintenance costs will inevitably be driven higher. Possible ways to cover these expenses are: an increase in the budget from the Ministry of Health, reviewing the hospital's current budget allocation, and charging user's fees and financial contributions from third parties. Reviewing the hospital's budget allocation will be a particular focus, while financial contributions from third parties can be done at the hospital's discretion, so their possibilities can be checked at any point in time. In addition, some items in the Project require small-scale construction work and the removal of existing equipment. It is assumed that this construction work will be carried out by architects and workers currently employed by the hospital.

(2) Policy concerning the use of local agents

Among the items procured, the equipment requiring the supply of consumables and maintenance services will be selected from manufacturers who have local agents that can provide specific services in Ukraine. Also, the project focuses on renovating and supplementing existing equipment, and those persons in charge of operating them have already mastered the basic handling of the equipment. At the same time, however, there is a gap of several generations between existing equipment and current equipment, encompassing a period of 10 to 20 years or more, and current equipment is designed to serve multiple

functions, with both of these factors cause improper used equipment. Thus, in addition to training of the operators immediately after the provision and installation of the equipment, the project planning includes operation instruction by engineers from local agencies for a given period of time after the equipment is in operation.

(3) Policy concerning the range and grade of the equipment to be procured

Based on the basic concept of the project, the following basic policy has been formulated with regard to replacement, supplementation and newly introduction of the equipment, and the specifications of each equipment.

1) Range of procured equipment

The targeted facility is a hospital that provides specialized high-level medical care, and the medical services required of the hospital are diverse and multi-faceted. The targeted age group spans neonatal infants to children aged 15, who are physically much the same as adults. The functions of the procured equipment should have a broad range enough to be applied to the various usages or examinees as far as that does not exceed the capability of the hospital in both technological and financial terms.

2) Policy concerning grades

The procured equipment must fit the purpose for which it is to be used, the number of patients, the number of tests, and other factors. The specifications will be set up such that this can be carried out using procedures and means already available within the hospital, and in terms of maintenance and management, as well, the specifications will be set up such that available resources within the hospital, or local agents, can be used. Additionally, in order to suppress the increase of maintenance costs to be borne by the hospital, equipment will be selected that allows reagents and consumables with lower costs to be used.

(4) Policy concerning procurement from third countries

From the standpoint of grant aid system, procured equipment will be selected from that manufactured either in Japan or in Ukraine, but with regard to that manufactured in Japan, with some items the question must be considered of whether or not local agents exist. Also, with regard to that manufactured in Ukraine, there are doubts with respect to some items concerning the reliability of the quality. As a result, in the event that there are no appropriate pertinent items in either country, procurement from a third country will be considered. As the equipment for which a local agent is considered indispensable, third-country procurement is considered for analytical apparatus and hemodialysis apparatus.

(5) Policy concerning the implementation schedule

According to national regulations in Ukraine, the exchange of notes with respect to

this project must be ratified by the Diet of Ukraine, and therefore signing of consultant contracts and subsequent implementation supervision duties will be initiated following the ratification by the Diet. The exchange of notes for this project is predicted to be signed sometime around August 2000. However because the Congress of the Ukrainian Diet is in session from September to November, it is thought that the schedule for the implementation stage will be delayed approximately three months beyond the exchange of notes. In order to complete the entire schedule within the period of the exchange of notes, the overall schedule will have to be carefully studied, and sufficient discussion carried out with the responsible ministry and the executing agency on Ukrainian side, with the schedule being comprehensively implemented at each stage. In particular, because this project is the first to be implemented as Japanese grant aid, it is important to carry out multiple discussions with Ukrainian side and obtain their specific understanding concerning the details of the cooperation scheme, the overall schedule following conclusion of the exchange of notes.

2-3-2 Basic design

(1) Overall project

This cooperation is aimed to contribute to the implementation of medical equipment of the hospital that is stagnant due to the financial difficulties. And this project is designed to adjust and balance the each functions of diagnostic, therapeutic and supportive services in the hospital based on the following criteria concerning replacement, supplement and newly introduction of equipment and its specifications. And another criterion was also set for numerical reducing or complete deleting of items from the project as described below.

Selection criteria for replacement of existing equipment:

The project first targets deteriorated or outdated equipment that was installed, in general, at least 10 years previously. Although a CT scanner and Thermal Cycler are not currently utilized, these are examined under this category, because the hospital had possessed and utilized them until several years ago.

Selection criterion for supplement for existing equipment:

The project also targets existing equipment of which quantity or quality is not sufficient enough to support hospital practice effectively.

Selection criteria for newly introduction of non-existing equipment:

Concerning to the equipment that might be introduced for the first time, the project will examine whether its clinical application has been well established, whether it is indispensable to the practice, whether its operation is appropriate for the technical level of personnel, and whether its maintenance is financially feasible for the hospital. The project will include this group of items only if all of these criteria are fulfilled.

Criterion for numerical reduction or rejection of requested items:

The project may reduce the number of items to be included or even delete particular items from the list if their cost for maintenance, consumables or reagents is too expensive to be covered by hospital budget.

The requested items were thoroughly examined and a currently existing equipment list was produced during the on-site study. The list was further analyzed in Japan as described below, and the equipment list has been prepared.

Step 1) Withdrawn of the requests:

The study team deleted several items for which the request was withdrawn by Ukrainian side during the course of the survey. Those were equipment for the Department of Obstetrics and an incinerator that required large-scale construction and an uninterruptible power supply (UPS).

Step 2) Rearrangement of the request on the list:

Items relating to gynecology were listed separately in the parts of Surgical Wards and Section of Imaging and Functional Diagnosis. Similarly, items for the polyclinic were listed in the part of Outpatient Department. In this step a few items were deleted because they have already been provided, or they were duplicated requests from different divisions.

Step 3) Needs analysis based on the priority set by Ukrainian side and budgetary constrains:

Some items were not adopted due to the low priority set by Ukrainian side and budgetary constrains.

Step 4) Numerical reduction or deletion of requested items:

The study team was forced to cut down the working list furthermore based on the Criterion for numerical reduction or rejection of requested items.

The equipment list finalized is shown at the end of this chapter, in “Table 3-11: Details of the Equipment Study and the Planned Equipment List”, prepared based on section 3-3-1, “Design concept”.

(2) Equipment planning

The following describes the contents of the planned equipment.

1) The Central Laboratory and the Bacteriology Laboratory

The primary items of equipment consist of microscopes, autoclaves (vertical type), electrolyte analyzers, coagulometers, spectrophotometers, biochemical analyzers, and haematological analyzers. All of these involve replacement or supplementation of existing equipment, and there are no newly introduced equipment.

The contents of the planned equipment and the sections in which the equipment is to be installed are shown in the table below. The refrigerator for storing blood will be shared with the Central Laboratory, while the analytical scale will be shared by the Central Laboratory and the Bacteriology Laboratory.

Table 2-1: Equipment Plan for the Central Laboratory and the Bacteriology Laboratory

Item No.	Name	Total	Laboratory						Bacteriology	Common
			Hematological Lab.	Biochemical Lab.	Virus Lab.	Immunology Lab.	Urgent Lab.	Common		
A-01	Refrigerator (Pharmaceutical)	1						1		
A-02	Freezer	1						1		
A-03	Microscope A	8	2	2	2	2				
A-04	Microscope (Fluorecent)	1			1					
A-05	Incubator (Laboratory)	3		1		1				
A-06	Incubator Large size (Laboratory)	2			1				1	
A-07	CO2 Incubator	2				1			1	
A-08	Autoclave (Vertical)	1							1	
A-09	Water Bath	4	1	1			2			
A-10	PH Meter	2						1	1	
A-11	Refract Meter	2					2			
A-12	Electrolyte Analyzer	2		1			1			
A-13	Coagulometer	2	1				1			
A-14	Spectrophotometer	3		1		1	1			
A-15	Centrifuge (Table top) A	3	1	1	1					
A-16	Hematocrit Centrifuge	4	1		1	1	1			
A-17	Analytical Scale	1								1
A-18	Biochemical Analyzer	1		1						
A-19	Hematological Analyzer	2	2							

2) The surgical wards

Major equipment covered by the plan includes an operating table, anaesthetic apparatuses, suction units, an electrosurgical unit, a mobile X-ray unit, an X-ray unit (C-arm), an operating monitor, surgical instrument sets for orthopaedic surgery, and instrument sets for microsurgery.

Although the C-arm type of X-ray unit is a new equipment item, the staff of the radiology division will be able to operate it without any difficulty, because they are familiar with the handling of fixed type of X-ray fluoroscopy. Currently, the hospital uses a mobile X-ray unit (this needs to be replacement because it was manufactured more than 20 years ago) instead of the C-arm type of machine. The project will introduce a set of the latter type expecting to make surgical procedure much easier in one side, and to save the maintenance cost required for the films and their development in the other side.

The contents of the planned equipment and the sections in which the equipment is to be installed are shown in the table below. Here, the Centre for Haematological Diseases is outside the managerial jurisdiction of the surgical divisions, but when procedures such as bone marrow transplantations are carried out in the Centre's own operating theatre, a defibrillator is currently being borrowed from the Surgical Wards. The two functions are located in different buildings, and moving the equipment is problematic. In addition, there is increased danger of bacterial contamination, so one defibrillator has been included in the planning.

Table 2-2: Equipment plan for surgical wards

Item No.	Name	(1)	Sergery											(13)
			(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
B-01	Operating Table (Universal)	8	1	1		1	1		1	1	1	1		
B-02	Anesthetic Apparatus	4							1	1	1	1		
B-03	Suction Unit A	15	2	2	1	2	2			2	2	2		
B-04	Electro Surgical Unit	8	2	2		1		1	1	1				
B-05	Pulse Oximeter	7								1	1	1	4	
B-06	X-Ray Unit (Mobile)	1	1											
B-07	X-Ray Unit (C-arm)	1												
B-08	Operating MonitorA	4	1						1	1		1		
B-09	Operating MonitorB	1					1							
B-10	Resuscitation Set (Hard case)	2			2									
B-11	Operating Microscope	1				1								
B-12	Defibrillator	3			2									1
B-13	Sterilizer (Hot air) A	6	2	2		1		1						
B-14	Operating Instruments (Basic)	1	1											
B-15	Operating Instrument Set (Orthopedic)	2		2										
B-16	Operating Instrument Set (Microsurgery)	2				2								
B-17	Operating Instrument Set (Emergency Tracheotomy)	1						1						
B-18	Operating Instrument Set (Venotomy)	3	3											
B-19	Kirschner Wire Traction Instrument Set	2		2										
B-20	Electromyograph	1				1								
B-21	Operating Light Ceiling Type	4	2	2										
B-22	Instrument Cart	3	3											
B-23	Infusion Pump	10							10					
B-24	Laparoscope set	1					1							

* (1) Total, (2) General Surgery, (3) Orthopedic Surgery, (4) Anesthesiology, (5) Microsugery, (6) Laparoscopy Surgery, (7) Urgent Surgery, (8) GY Surgery, (9) ENT Surgery, (10) Infection Surgery, (11) Emergency Surgery, (12) Reanimation Surgery, (13) Hemodialysis

3) Section of Imaging and Functional Diagnosis

The major equipment consists of ECG, and EEG, a CT scanner, endoscopes, and an ultrasonic scanner. Only a fibroscope cleaning machine is a new item for this division. This is a simple sink for cleaning endoscopes, and poses no problems either technically or financially. In order to assure maintenance of the endoscopes to be introduced simultaneously under this project, one unit has been included in the planning, although it was listed as "B" level on the priority order. The contents of the equipment planning and the sections in which it will be introduced are shown in the table below.

Table 2-3: Equipment plan for Section of Imaging and Functional Diagnosis

Item No.	Name	Total	Functional Diagnostic				
			ECG Room	EEG Room	Endoscopy	Rentgenology	Ultrasonics
C-01	ECG, 6-Ch	1	1				
C-02	EEG	1		1			
C-03	Diagnostic X-Ray System	1				1	
C-04	CT Scanner	1				1	
C-05	X-Ray Protection Set	1				1	
C-06	X-Ray Film Processor (Table top)	1				1	
C-07	Film Marker	1				1	
C-08	Gastrofiberscope A	2			2		
C-09	Gastrofiberscope B	1			1		
C-10	Colonofiberscope A	1			1		
C-11	Fiberscope Suction Unit	1			1		
C-12	Fiberscope Illuminator	2			2		
C-13	Fiberscope Cleaning Machine	1			1		
C-14	Fiberscope Cabinet	1			1		
C-15	Endoscopic Instruments Set	1			1		
C-16	Bronchoscope	2			2		
C-17	Ultrasonic Scanner (Color doppler)	1					1
C-18	ECG, 1-Ch	2	2				
C-19	Pulse Oximeter	1			1		

Since 1986, there has been a CT scanner made by Picker of the U.S. on the third floor of the polyclinic, but it was originally acquired as secondhand and tended to break down easily. In addition, spare parts are no longer being manufactured for it, and in 1998 attempts to repair it were abandoned. Since 1985, a total of 80 units of CT scanners have been introduced in Ukraine, but reports indicate that currently there are only about ten scanners working normally in Kiev. There are ten pediatric hospitals in Kiev, but none of them are equipped with CT scanners, and patients requiring scans are sent to neighboring hospitals for the adult population.

Conducting CT scans on pediatric patients at hospitals designed for adult treatment gives rise to problems in the areas of sedative treatment used in order to carry out the scan, misdiagnosis because of lack of knowledge and experience working with pediatric patients, and X-ray

irradiation that is excessive because the machines are designed for use with adult patients. If a CT scanner can be re-introduced in the hospital, problems like these can be solved, and it will be possible to arrive at diagnoses earlier and initiate treatment more rapidly. Also, because the hospital serves as the nation's top referral hospital for pediatric illnesses and as an educational hospital for specialists, the neighboring area will be strongly affected by a new CT scanner. Based on diagnostic records for 1999, a CT scanner would have been used in 1) 100 emergency cases, 2) 1,000 cases of malignancy and leukemia, 3) 400 cases of abdominal and pulmonary diseases, 4) 500 cases in which intracranial lesions were either not discovered or were denied, and 5) 100 cases in which physicians searched for inflammatory foci. Given these figures, it is thought that there is substantial need for a CT scanner, and if requests from peripheral pediatric hospitals are included, the total number of tests requested would push demand to an estimated level of around 2,500 cases per year. Thus, CT scanner was judged to be a necessity.

Additional costs incurred by re-introducing a CT scanner are calculated based on expected annual demand of 2,500 tests. Calculating in Japanese yen, the cost for replacing the bulb in the scanner would amount to 3.5 million yen per year (with the bulb being replaced once every other year). Film, developer, and fixing solution would add another 1.04 million yen per year. In the hospital's account settlements for 1999, equipment maintenance costs came to 904,510 Hryvnia (equivalent to 18 million yen), while expenses for pharmaceuticals, consumables and reagents amounted to 2,186,516 Hryvnia (equivalent to 43 million yen). The additional costs for a CT scanner cannot be considered trivial, but given the overall annual expenditures of 13,413,514 Hryvnia (equivalent to 270 million yen), it is judged that the hospital can support these additional costs. Contributions and donations are also increasing on an annual basis, and a portion of these can be allocated to offset additional costs. Also, although it is not presently being done, if a system is introduced under which patients would be charged a sum of around US$ 20 per examination, it is thought that the anticipated increase in maintenance costs can be absorbed even further.

With regard to operation of CT scanner, a number of technicians can be trained during a 1- or 2-week period, and a system can be set up so examinations can be handled on a 24-hour basis. Diagnoses would be made by the pediatric radiologists (five persons) at the hospital. The treatment system has long been adequate to meet patient needs, and after the CT scanner is introduced, surgical procedures can be carried out more rapidly and more accurately, so that improvement can be anticipated in the level of medical care available.

4) The Neonatal Wards

The primary items of equipment include infant incubators, infusion pumps, neonatal monitors, syringe infusion pumps, mobile X-ray units, ventilators, ultrasonic scanners, infant

radiant warmers, and other items.

All of the equipment targeted for these wards consists of replacement or supplementary equipment. A portion of the equipment to be allocated to the Center for Haematological Diseases (ten infusion pumps) is also included here. The Center has only 27 infusion pumps for its 53 beds, and half of those are at least 15 years old. When additional pumps are necessary, they are borrowed from the Neonatal Wards, but the same problems described for defibrillators under the section on the surgical wards occur here with infusion pumps, and for this reason, the pumps have been included the planning.

The following table describes the equipment to be allocated to the various sub-sections.

Table 2-4: Equipment plan for Neonatal Wards

Item No.	Name	Total	Neonatalogy				Onco-Hematology Center
			Neonatal Intensive Care	Premature 1	Premature 2	Newborn Sergery	
D-01	Incubator (Pediatric)	18	8	4	4	2	
D-02	Suction Unit B	10	5	2	2	1	
D-03	Infusion Pump	10					10
D-04	Sterilizer (Hot air) B	3	1	1	1		
D-05	Neonatal Monitor	4		2	2		
D-06	Srynge Pump	12	6	2	2	2	
D-07	Phototherapy Unit	6	2		2		
D-08	Ventilator A	5	5				
D-09	X-Ray Unit (Mobile)	1	1				
D-10	Ultrasonic Scanner (Portable)	1	1				
D-11	CPAP Apparatus	5	5				
D-12	Incubator (Transport) A	1	1				
D-13	Incubator (Transport) B	1	1				
D-14	Infantwamer	4	1	1	1	1	

5) Surgical ICU

Equipment targeted by the planning includes a central patient monitor system (eight beds), ventilators, a defibrillator, infusion pumps, syringe infusion pumps, ventilators (portable), a mobile X-ray unit, and an ultrasonic scanner. All of the planned equipment is replacement or supplementary equipment. The equipment specifications are for items appropriate for use with patients ranging in age from newborn to age 15.

Table 2-5: Equipment plan for Surgical ICU

Item No.	Name	Total
E-01	Central Monitor System (8 Beds)	1
E-02	Ventilator B	5
E-03	Defibrillator	1
E-04	Infusion Pump	10
E-05	Syringe Pump	10
E-06	Ventilator (Portable)	2
E-07	X-Ray Unit (Mobile)	1
E-08	Ultrasonic Scanner (Portable)	1

6) Physiotherapy

Equipment includes low-frequency therapy units, interferential therapy units, microwave therapy units, short-wave therapy units, ultrasonic therapy units, ultraviolet therapy units, infrared ray thermal units, and infrared ray lamps. All of the planned equipment is replaced or supplementary equipment.

The following table shows the equipment plan for this project.

Table 2-6: Equipment plan for physiotherapy

Item No.	Name	Total	Physiotherapy									
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
F-01	Low Frequency Therapy Unit	3					1					2
F-02	Interferential Therapy Unit	2	1									1
F-03	Microwave Therapy Unit	2		1		1						
F-04	Short-Wave Therapy Unit	2	1				1					
F-05	Ultrasonic Therapy Unit	2							1			
F-06	Ultraviolet Lamp	2			1						1	
F-07	Infrared Ray Thermal Unit	2				1					1	
F-08	Infrared Ray Lamp	2		1						1		
*	(1) Alergy & Immunology, (2) Endocrinology, (3) GY. Surgery, (4) ENT Surgery, (5) Neurology, (6) Urgent Surgery, (7) Infection Surgery, (8) Chest-Abdomen. Surgery, (9) Newborn Surgery, Microsurgery											

7) Outpatient department (polyclinic)

Major equipment includes an autoclave (vertical type), a spectrophotometer, a haemoglobin analyzer, ECGs, an electroencephalography (EEG), fiberscopes, a fiberscope cleaning machine, an ultrasonic scanner, an operation light (mobile type), bilirubin meters, and others. All of these except the fiberscope cleaning machine and the bilirubin meters are replaced or supplementary items.

Bilirubin meters play an extremely valuable role in diagnosing jaundice in infants. The level of testing precision is not as high as that of biochemical testing, but it is sufficient to

allow physicians to determine whether or not treatment should be needed. And while the testing with the latter requires half a day or more, the results can be obtained with a bilirubin meter in a mere 15 minutes. Operation is simple, and because no reagents are used, bilirubin meters are economical. Once jaundice has been diagnosed at the polyclinic, it is necessary to move infants quickly to the room for premature babies at the main facility, and to begin phototherapy. For this reason, it is included to the project two bilirubin meters.

The fiberscope cleaning machines are as described in the item entitled "Section of Imaging and Functional Diagnosis". The following table shows the allocation of equipment targeted by the project planning.

Table 2-7: Equipment plan for Outpatient Department

Item No.	Name	Total	Policlinic (Outpatient)							
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
G-01	Diagnostic Set	5						3	2	
G-02	Examination Table A	7						3	4	
G-03	Examination Table B	3						2	1	
G-04	Examination Light	10					3			7
G-05	Ultrasonic Neblizer	10						2	2	6
G-06	Suction Unit C	6								6
G-07	Sterilizer (Hot air) A	2	1				1			
G-08	Sterilizer (Hot air) B	2				1	1			
G-09	Bilirubin Meter	1	1							
G-10	Instrument Cart	2					2			
G-11	Microscope A	3	3							
G-12	Incubator (Laboratory)	2	2							
G-13	Autoclave (Vertical)	1	1							
G-14	Water Bath	1	1							
G-15	Water Bath (Coagulation test)	1	1							
G-16	PH Meter	1							1	
G-17	Refract Meter	1	1							
G-18	Spectrophotometer	1	1							
G-19	Centrifuge (Table top) A	2	2							
G-20	Hematocrit Centrifuge	1	1							
G-21	Analytical Scale	1	1							
G-22	Hematological Analyzer	1	1							
G-23	Operating Instrument (Basic)	1					1			
G-24	ECG, 6-Ch	3		3						
G-25	EEG	1		1						
G-26	X-Ray Film Processor (Table top)	1			1					
G-27	Gastrofiberscope C	2				2				
	(1) Hematology Laboratory, (2) Function Diagnosis, (3) Rentgen (4) Endoscopy									
	(5) Gynecology, (6) Pediatric No.1, (7) Pediatric No.2, (8) Reanimation									

Item No.	Name	Total	Policlinic (Outpatient)							
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
G-28	Gastrofiberscope D	1				1				
G-29	Colonofiberscope B	2				2				
G-30	Fiberscope Suction Unit	1				1				
G-31	Fiberscope Illuminator	1				1				
G-32	Fiberscope Cleaning Machine	1				1				
G-33	ECG, 1-Ch	1					1			
G-34	Suction Unit A	2					2			
G-35	Ultrasonic Scanner	1					1			
G-36	Operating Light (Mobile)	1					1			
	(1) Hematology Laboratory, (2) Function Diagnosis, (3) Rentgen (4) Endoscopy									
	(5) Gynecology, (6) Pediatric No.1, (7) Pediatric No.2, (8) Reanimation									

8) Centre of Medical Genetics

The current staff is satisfied with the required technical level, and the cost can be borne by the hospital. Also, with regard to chromosomal examination and molecular diagnosis of genetic disorders, it has been confirmed that prenatal diagnosis of the fetus is not being carried out, so it has been judged that there are no problems from a ethical standpoint. With that in mind, the project planning includes microscopes, a fluorescent microscope, a chromosome analyzing system, an electrophoresis machine, a thermal cycler, refrigerators(pharmaceutical), a centrifuge (table-top), and other items. All of the planned equipment consists of replacement or supplementary equipment.

The distribution of the planned equipment to the various laboratories is shown in the table below.

Table 2-8: Equipment plan for Center of Medical Genetics

Item No.	Name	Total	Cytogenetic Laboratory			
			Biochemical Lab.	Chromatic Lab.	Genetic Lab.	Common
H-01	Microscope B	2		2		
H-02	Microscope (Fluorecent)	1		1		
H-03	Cariotyping System	1		1		
H-04	CO2 Incubator	1		1		
H-05	Analytical Scale	1				1
H-06	Electrophoresis Box	1			1	
H-07	Thermal Cycler	1			1	
H-08	Freezer	1				1
H-09	Refrigerator (Pharmaceutical)	2				2
H-10	Centrifuge (Table top) B	1			1	

9) Department of Poisoning and Dialysis

A water treatment system is indispensable to haemodialysis, and it is not possible to operate dialysers without a supply of clean water. The filtrator in the present system is cracked, and the control unit of the system also tends to break down. Because the industry in

Russia which delivered the system has gone bankrupt, it is impossible to have the system inspected periodically or repaired. Because it will not be long before the system comes to a complete halt, it was decided to include a water treatment system among the planned equipment.

Equipment included in the project planning consists of a haemodialyser, a peritoneal dialysis machine, a plasmapheresis apparatus, a water treatment system, a hemoadsorption apparatus, a ventilator, and a defibrillator. All of the equipment included in the project planning consists of repalacement or supplementary items.

Table 2-9: Equipment plan for Department of Poisoning and Dialysis

Item No.	Genelic title	Q'ty
I-1	Hemodialysis Apparatus A	2
I-2	Hemodialysis Apparatus B	2
I-3	Peritoneal Dialysis Apparatus	2
I-4	Water Treatment System	1
I-5	Plasmapheresis Apparatus	1
I-6	Hemosorbtion Apparatus	1
I-7	Ventilator A	1
I-8	Defibrillator	1

10) Other (Laundry, CSSD)

Laundry

The planned equipment includes a washing machine (with a dehydrator), a dryer, a press machine (for sheets), and a press machine (for uniforms). The existing system was designed so that steam supplied by two steam generators in a separate building serves as both the source of heat and as motive force, but one of these has already broken down. The other has been used for more than ten years, and because the manufacturer in Russia who originally delivered the equipment no longer exist, it is no longer possible to procure spare parts for repairs. With that in mind, the project planning adopts a method that does not rely on the existing steam supply system. The washing machine will be electric, and the ironing table will have a steam generator and a built-in compressor. An ironing table for white uniforms has also been requested as an additional item. The existing ironing table is a model that is already obsolete by two product generations, and although it still works, it is very difficult to procure parts for it when it breaks down. Also, it is anticipated that the heat source and drive source (compressed air) for this division will come to a stop and no longer be usable in the near future, and given the extremely heavy processing volume, consisting of around 850 items on a daily basis, it was decided to include these items in the project planning.

CSSD

Like the laundry, planning includes a high-pressure steam sterilizer (disinfector) that either has its own built-in steam generator, or comes with a separate steam generator, and does not rely on the existing steam supply system.

Table 2-10: Equipment plan for Department of Other (Laundry, CSSD)

Item No.	Name	Q'ty	CSSD	Landry
J-01	Sterilizer (Hot air) A	4		
J-02	Autoclave (Hige Pressure Steam Sterilizer)	2	2	
J-03	Laundry Machine	4		4
J-04	Drying Machine	2		2
J-05	Press Machine (sheet)	2		2
J-06	Press Machine (uniform)	4		4

Table 2-11 Details of th Equipment Study and the Planned Equipment List

B/D現地調査終了時							Process of Equipment Selection						Planed Equipment										
Item No.	Genelic title	Q'ty Total	Hospital	Polyclinic			Rearrangement of Equip. List	Deletion of Req. Equip.	Deletion by Budget / Priority	Deletion / Reduction	Category		Item No.	Genelic title	Description	Q'ty Total	Hospital		Polyclinic		Q'ty Total
			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	
A. Laboratory													A. Laboratory										
A-01	Refrigerator (Pharmaceutical)	1	1	A	-	-					☆		A-01	Refrigerator (Pharmaceutical)	冷蔵庫（試薬）	1	1	A	-	-	1
A-02	Refrigerator (Blood)	1	1	A	-	-					☆		A-02	Freezer	冷蔵庫（血液保存）	1	1	A	-	-	1
A-03	Microscope	11	8	A	3	A	3				☆		A-03	Microscope A	顕微鏡 A	8	8	A	-	-	8
	Microscope (Fluorecent)	1	1	A	-	-					☆		A-04	Microscope (Fluorecent)	顕微鏡（蛍光）	1	1	A	-	-	1
A-04	Incubator (Laboratory)	7	5	A	2	A	3, 7				☆		A-05	Incubator (Laboratory)	ふ卵器	3	3	A	-	-	3
							7				☆		A-06	Incubator Large size (Laboratory)	ふ卵器（大型）	2	2	A			2
A-05	CO2 Incubator	2	2	A	-	-					☆		A-07	CO2 Incubator	炭酸ガス培養器	2	2	A	-	-	2
A-06	Autoclave (Vertical)	2	1	A	1	A	3				☆		A-08	Autoclave (Vertical)	オートクレーブ（縦型）	1	1	A	-	-	1
A-07	Water Bath	5	4	A	1	A	3				☆		A-09	Water Bath	恒温水槽	4	4	A	-	-	4
	Water Bath (Coagulation test)	1			1	A	3							Water Bath (Coagulation test)	恒温水槽（凝固検査）	-	-	-	-	-	0
A-08	Mixer	2	2	B	-	-			○					Mixer	ミキサー	0	0	-	-	-	0
A-09	Rotator Mixer	2	2	C	-	-			○					Rotator Mixer	ミキサー（回転型）	0	0	-	-	-	0
A-10	Bacteriological Analyzer	1	1	A	-	-				2				Bacteriological Analyzer	細菌解析装置	0	0	-	-	-	0
A-11	Cytoflorimeter	3	3	C	-	-			○					Cytoflorimeter	フローサイトメーター	0	0	-	-	-	0
A-12	Hemoglobin Meter	1	1	A	-	-	4							Hemoglobin Meter	ヘモグロビンメーター	0	0	-	-	-	0
A-13	PH Meter	3	2	A	1	A	3				☆		A-10	PH Meter	ｐＨメーター	2	2	A	-	-	2
A-14	Refract Meter	3	2	A	1	A	3				☆		A-11	Refract Meter	屈折計	2	2	A	-	-	2
A-15	Electrolyte Analyzer	2	2	A	-	-					☆		A-12	Electrolyte Analyzer	電解質分析装置	2	2	A	-	-	2
A-16	Coagulometer	2	2	A	-	-					☆		A-13	Coagulometer	凝固測定器	2	2	A	-	-	2
A-17	Spectrophotometer	4	3	A	1	A	3				☆		A-14	Spectrophotometer	分光光度計	3	3	A	-	-	3
A-18	Centrifuge (Table top)	4	3	A	1	A	3				☆		A-15	Centrifuge (Table top)	遠心器（卓上）	3	3	A	-	-	3
A-19	Centrifuge (Hematocrit)	6	4	A	2	A	3				☆		A-16	Centrifuge (Hematocrit)	ヘマトクリット遠心器	4	4	A	-	-	4
A-20	Analytical Scales	2	1	A	1	A	3				☆		A-17	Analytical Scales	分析天秤	1	1	A	-	-	1
A-21	Slide Staining Set	4	2	C	2	C	3		○		☆			Slide Staining Set	染色セット	0	0	-	-	-	0
A-25	Biochemical Analyzer	1	1	A	-	-					☆		A-18	Biochemical Analyzer	生化学分析装置	1	1	A	-	-	1
A-26	Immuno Reader	1	1	A	-	-				4				Immuno Reader	マイクロプレートリーダ	0	0	-	-	-	0
A-27	Plate Washer	2	2	B	-	-			○					Plate Washer	マイクロプレート洗浄器	0	0	-	-	-	0
A-28	Hematological Analyzer	3	2	A	1	A	3				☆		A-19	Hematological Analyzer	自動血球計数装置	2	2	A	-	-	2
A-29	Freezer	1	1	A	-	-				4				Freezer	フリーザー	0	0	-	-	-	0
A-31	Laminal Box	3	3	A	-	-				4				Laminal Box	クリーンベンチ	0	0	-	-	-	0
A-32	PCR system	1	1	A	-	-				4				PCR system	PCRシステム	0	0	-	-	-	0
B. Surgical operation theater													B. Surgical operation theater										
B-01	Operating Table (Universal)	7	7	A	-	-	1-1				☆		B-01	Operating Table (Universal)	手術台（汎用 油圧）	7	7	A	-	-	7
B-02	Anesthetic Apparatus	6	6	A	-	-				3	☆		B-02	Anesthetic Apparatus	麻酔器	4	4	A	-	-	4
B-04	Suction Unit	15	15	A	-	-					☆		B-03	Suction Unit A	吸引器 A	15	15	A	-	-	15
B-05	Electro Surgical Unit	7	7	A	-	-	1-2				☆		B-04	Electro Surgical Unit	電気メス	8	8	A	-	-	8
B-06	Pulse Oximeter	8	8	A	-	-	4				☆		B-05	Pulse Oximeter	パルスオキシメーター	7	7	A	-	-	7
B-08	X-Ray Unit (Mobile)	1	1	A	-	-					☆		B-06	X-Ray Unit (Mobile)	X線撮影装置（移動式）	1	1	A	-	-	1
B-09	X-Ray Unit (C-arm)	1	1	A	-	-						☆	B-07	X-Ray Unit (C-arm)	X線撮影装置（Cｱｰﾑ）	1	1	A	-	-	1
B-10	Operating Monitor	5	5	A	-	-					☆		B-08	Operating Monitor A	患者モニターA	4	4	A	-	-	4
											☆		B-09	Operating Monitor B	患者モニターB	1	1	A	-	-	4
B-11	Resuscitation Set (Hard case)	2	2	A	-	-					☆		B-10	Resuscitation Set (Hard case)	蘇生セット（酸素ボンベ付）	2	2	A	-	-	2
B-12	Endotracheal Set (Infant)	3	3	B	-	-			○					Endotracheal Set (Infant)	挿管セット（乳児）	0	0	-	-	-	0
B-13	Endotracheal Set (Adult)	3	3	B	-	-			○					Endotracheal Set (Adult)	挿管セット（大人）	0	0	-	-	-	0
B-14	Operating Microscope	1	1	A	-	-					☆		B-11	Operating Microscope	手術用顕微鏡（神経科）	1	1	A	-	-	1

Table 2-11 Details of th Equipment Study and the Planned Equipment List

B/D現地調査終了時							Process of Equipment Selection						Planed Equipment										
Item No.	Genelic title	Q'ty Total	Hospital	Polyclinic			Rearrangement of Equip. List	Deletion of Req. Equip.	Deletion by Budget / Priority	Deletion / Reduction	Category		Item No.	Genelic title	Description	Q'ty Total	Hospital		Polyclinic		Q'ty
			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	Total
B-15	Laparoscope Set	1	1	A	-	-				5				Laparoscope Set	腹腔鏡セット	0	0	-	-	-	0
B-16	Gypsum Cutter	2	2	B	-	-			○					Gypsum Cutter	ギプスカッター	0	0	-	-	-	0
B-17	Oxygen Monitor	2	2	B	-	-			○					Oxygen Monitor	酸素モニター	0	0	-	-	-	0
B-18	Defibrillator	3	3	A	-	-					☆		B-12	Defibrillator	除細動器	3	3	A	-	-	3
B-19	Washing Machine (Instruments)	1	1	B	-	-			○					Washing Machine (Instruments)	洗浄機（外科器具）	0	0	-	-	-	0
B-20	Sterilizer (Hot air)	7	6	A	1	A	3-1				☆		B-13	Sterilizer (Hot air) A	滅菌器（乾熱）A	6	6	A	-	-	6
B-22	Hemostatic Forceps (Mosquito)	40	40	B	-	-			○					Hemostatic Forceps (Mosquito)	止血鉗子（モスキート）	0	0	-	-	-	0
B-23	Hemostatic Forceps (Kocher)	40	40	B	-	-			○					Hemostatic Forceps (Kocher)	氏止血鉗子（コッヘル）	0	0	-	-	-	0
B-24	Hemostatic Forceps (Kelly)	50	50	B	-	-			○					Hemostatic Forceps (Kelly)	止血鉗子（ケリー）	0	0	-	-	-	0
B-25	Scissors	50	40	B	10	B	3		○					Scissors	剪刀	0	0	-	-	-	0
B-26	Needle Holder (Hegar Mayo)	10	10	B	-	-			○					Needle Holder (Hegar Mayo)	持針器（メーヨー・ヘガール）	0	0	-	-	-	0
B-27	Needle Holder	20	20	B	-	-			○					Needle Holder	持針器	0	0	-	-	-	0
B-28	Needle Holder (Mathieu)	10	10	B	-	-			○					Needle Holder (Mathieu)	持針器（マッチウ）	0	0	-	-	-	0
B-29	Needle Holder (Roser)	5	5	B	-	-			○					Needle Holder (Roser)	持針器（ローゼル）	0	0	-	-	-	0
							5				☆		B-14	Operating Instruments (Basic)	手術器具（基本）	1	1	A			1
B-30	Blood Vessel Needle Holder	5	5	A	-	-	5							Blood Vessel Needle Holder	血管用持針器	0	0	-	-	-	0
B-31	Dissecting Scissors (Mayo)	30	30	A	-	-	5							Dissecting Scissors (Mayo)	剪刀（メーヨー）	0	0	-	-	-	0
B-32	Scissors (Meztembaum, long)	30	20	A	10	A	3, 5							Scissors (Meztembaum, long)	剪刀（メッツエンバウム、長）	0	0	-	-	-	0
B-33	Dressing Forceps	30	30	A	-	-	5							Dressing Forceps	外科用ピンセット	0	0	-	-	-	0
B-34	Tissue Forceps	30	30	A	-	-	5							Tissue Forceps	鈎付ピンセット	0	0	-	-	-	0
B-35	Intestinal forceps (Allis)	15	15	A	-	-	5							Intestinal forceps (Allis)	腸鉗子（アリス）	0	0	-	-	-	0
B-36	Scissors (Meztembaum, short)	5	5	B	-	-			○					Scissors (Meztembaum, short)	剪刀（メッツエンバウム、短）	0	0	-	-	-	0
B-37	Retractor(Kocher)	5	5	B	-	-			○					Retractor(Kocher)	開創器（コッヘル）	0	0	-	-	-	0
B-38	Retractor (Langenbech)	5	5	B	-	-			○					Retractor (Langenbech)	開創器（ランゲンベック）	0	0	-	-	-	0
B-39	Abdominal Retractor (Frisach)	5	5	B	-	-			○					Abdominal Retractor (Frisach)	腹部開創器（フリサック）	0	0	-	-	-	0
B-40	Abdominal Retractror (Right-Angle)	5	5	B	-	-			○					Abdominal Retractor (Right-Angle)	腹部開創器（直角？）	0	0	-	-	-	0
B-41	Abdominal Retractor	2	2	B	-	-			○					Abdominal Retractor	腹部開創器	0	0	-	-	-	0
B-42	Operating Instrument Set (Orthopedic)	3	3	A	-	-				3	☆		B-15	Operating Instrument Set (Orthopedic	手術器具セット（整形外科）	2	2	A	-	-	2
B-43	Operating Instrument Set (Infant)	3	3	B	-	-			○					Operating Instrument Set (Infant)	手術器具セット（乳児）	0	0	-	-	-	0
	Operating Instrument Set (Minor)	2	-	-	2	B	3							Operating Instrument Set (Minor)	手術器具セット（小）	0	0	-	-	-	0
B-44	Operating Instrument Set (Microsurgery)	3	3	B	-	-				3	☆		B-16	Operating Instrument Set (Microsurge	手術器具セット（ﾏｲｸﾛｻｰｼﾞｪﾘ）	2	2	A	-	-	2
B-45	Operating Instrument Set (Nephrectomy)	2	2	B	-	-			○					Operating Instrument Set (Nephrector	手術器具セット（腎摘出）	0	0	-	-	-	0
B-46	Operating Instrument Set (Emergency Tracheotomy)	1	1	A	-	-					☆		B-17	Operating Instrument Set (Emergency	手術器具セット（緊急気管切開）	1	1	A	-	-	1
B-47	Operating Instrument Set (Appendectomy)	2	2	B	-	-			○					Operating Instrument Set (Appendect	手術器具セット（虫垂切除）	0	0	-	-	-	0
B-48	Operating Instrument Set (Venotomy)	3	3	A	-	-					☆		B-18	Operating Instrument Set (Venotomy)	手術器具セット（静脈切開）	3	3	A	-	-	3
B-49	Retractor	5	5	B	-	-			○					Retractor	開創器	0	0	-	-	-	0
B-50	Air Pressure Skull Operation Set	1	1	B	-	-			○					Air Pressure Skull Operation Set	空圧式頭蓋手術セット	0	0	-	-	-	0
B-51	Kirschner Wire Traction Instrument Set	2	2	A	-	-					☆		B-19	Kirschner Wire Traction Instrument S	キルシュナー鋼線牽引器具セット	2	2	A	-	-	2
B-53	Abdominal Retractor (Houzel's)	2	2	B	-	-			○					Abdominal Retractor (Houzel's)	腹部開創器（ホゼル）	0	0	-	-	-	0
C-20	Electromyograph	1	1	A	-	-					☆		B-20	Electromyograph	筋電計	1	1	A	-	-	1
D-13	Operating Light Ceiling Type	4	4	A	-	-					☆		B-21	Operating Light Ceiling Type	無影灯（天吊り型）	4	4	A	-	-	4
H-09	IV Stand	8	8	A	-	-			○					IV Stand	点滴台	0	0	-	-	-	0
H-15	Instrument Cart	3	3	A	-	-					☆		B-22	Instrument Cart	器材台車	3	3	A	-	-	3
							1-3				☆		B-23	Infusion Pump	輸液ポンプ	10	10	A	-	-	10
													B-24	Laparoscope Set	腹腔鏡セット	1	1				1
C. Functional diagnostic													C. Functional diagnostic								

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			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	Total
C-01	ECG, 6-Ch	3	1	A	2	A	3				☆		C-01	ECG, 6-Ch	心電計（６チャンネル）	1	1	A	-	-	1
C-02	EEG	2	1	A	1	A	3				☆		C-02	EEG	脳波計	1	1	A	-	-	1
C-03	Diagnostic X-Ray System	1	1	A	-	-					☆		C-03	Diagnostic X-Ray System	X線診断システム	1	1	A	-	-	1
C-04	CT Scanner	1	1	A	-	-					☆※		C-04	CT Scanner	ＣＴスキャナー	1	1	A	-	-	1
C-06	X-Ray Protection Set	1	1	A	-	-					☆		C-05	X-Ray Protection Set	X線防御セット	1	1	A	-	-	1
C-07	X-Ray Film Processor (Table top)	2	1	A	1	A	3				☆		C-06	X-Ray Film Processor (Table top)	X線フィルム現像器（卓上）	1	1	A	-	-	1
C-09	X-Ray Film Development Set (Manual)	1	1	B	-	-			○					X-Ray Film Development Set (Manua	X線フィルム現像セット（手動）	0	0	-	-	-	0
C-10	Film Marker	1	1	A	-	-					☆		C-07	Film Marker	フィルムマーカー	1	1	A	-	-	1
C-12	Gastrofiberscope	8	4	A	4	A	3, 7			3	☆		C-08	Gastrofiberscope A	胃ファイバースコープＡ	2	2	A	-	-	2
							7				☆		C-09	Gastrofiberscope B	胃ファイバースコープＢ	1	1	A			1
C-13	Colonofiberscope	3	1	A	2	A	3				☆		C-10	Colonofiberscope A	大腸ファイバースコープＡ	1	1	A	-	-	1
C-14	Fiberscope Table	2	1	C	1	C	3		○		☆			Fiberscope Table	軟性鏡検査台	0	0	-	-	-	0
C-15	Fiberscope Trolley	1	1	B	-	-			○		☆			Fiberscope Trolley	軟性鏡用台車	0	0	-	-	-	0
C-16	Fiberscope Suction Unit	2	1	A	1	A	3				☆		C-11	Fiberscope Suction Unit	軟性用吸引器	1	1	A	-	1	1
C-17	Fiberscope Illuminator	3	2	A	1	A	3				☆		C-12	Fiberscope Illuminator	軟性鏡用光源装置	2	2	A	-	-	2
C-18	Fiberscope Cleaning Machine	2	1	B	1	B	3					☆	C-13	Fiberscope Cleaning Machine	軟性鏡洗浄器	1	1	B	-	-	1
C-19	Fiberscope Cabinet	1	1	A	-	-					☆		C-14	Fiberscope Cabinet	軟性鏡用戸棚	1	1	A	-	-	1
C-21	Endoscopic Instruments Set	1	1	A	-	-					☆		C-15	Endoscopic Instruments Set	内視鏡器具セット	1	1	A	-	-	1
C-22	Bronchoscope	2	2	A	-	-					☆		C-16	Bronchoscope	気管支鏡	2	2	A	-	-	2
E-03	Ultrasonic Scanner (Color doppler)	1	1	A	-	-					☆		C-17	Ultrasonic Scanner (Color doppler)	超音波診断装置（カラードップラー）	1	1	A	-	-	1
E-06	ECG, 3-Ch	1	-	-	1	A	3							ECG, 3-Ch	心電計（３チャンネル）	0	0	-	-	-	0
H-06	ECG, 1-Ch	3	2	A	1	A	3				☆		C-18	ECG, 1-Ch	心電計（１チャンネル）	2	2	A	-	-	2
							4				☆		C-19	Pulse Oximeter	パルスオキシメーター	1	1	A	-	-	1
D. Gynecology							1														
D-01	Electronic Suction Pump	2			2	A	3							Electronic Suction Pump	吸引器	-	-	-	-	-	-
D-02	Infusion Pump	10	10	A	-	-	1-3							Infusion Pump	輸液ポンプ	-	-	-	-	-	-
D-03	Instrument Set for Episiotomy	2	2	D	-	-		○						Instrument Set for Episiotomy	会陰切開器具セット	0	0	-	-	-	0
D-04	Delivery Monitor CTG	2	2	D	-	-		○						Delivery Monitor CTG	分娩監視装置	0	0	-	-	-	0
D-05	Vacuum Extractor	1	1	D	-	-		○						Vacuum Extractor	分娩用吸引器	0	0	-	-	-	0
D-06	Forceps for Delivery	2	2	D	-	-		○						Forceps for Delivery	分娩用鉗子	0	0	-	-	-	0
D-08	Delivery Bed	2	2	D	-	-		○						Delivery Bed	分娩台	0	0	-	-	-	0
D-09	Ultrasonic Scanner	1	-	-	1	A	3							Ultrasonic Scanner	超音波診断装置（婦人科）	-	-	-	-	-	-
D-10	Examination Table (Gynecology)	2	1	B	1	B			○					Examination Table (Gynecology)	診察台（婦人科）	0	0	-	-	-	0
D-11	Obstetric Examination Table	1	1	D	-	-		○						Obstetric Examination Table	診察台（産科）	0	0	-	-	-	0
D-12	Operating Table (Gynecology)	1	1	A	-	-	1-1							Operating Table (Gynecology)	手術台（婦人科）	-	-	-	-	-	-
D-13	Operating Light (Mobile)	1			1	A	3							Operating Light (Mobile)	無影灯（移動式）	-	-	-	-	-	-
D-14	Abdominal Hysterectomy Instrument Set	1	1	D	-	-		○						Abdominal Hysterectomy Instrument	腹式子宮摘出器具セット	0	0	-	-	-	0
D-15	Hysterectomy Instrument Set (Vaginal)	1	1	B	-	-			○					Hysterectomy Instrument Set (Vagina	膣式子宮摘出器具セット	0	0	-	-	-	0
D-16	Cesarean Section Instrument Set	1	1	D	-	-		○						Cesarean Section Instrument Set	帝王切開器具セット	0	0	-	-	-	0
D-17	Microchirugye Set for Fertility	1	1	D	-	-		○						Microchirugye Set for Fertility	顕微鏡手術セット（受精用）	0	0	-	-	-	0
D-18	Electro Surgical Unit	1	1	A	-	-	1-2							Electro Surgical Unit	電気メス	-	-	-	-	-	-
E. Pediatric							2						D. Neonatalogy									
E-01	Incubator (Pediatric)	18	18	A	-	-					☆		D-01	Incubator (Pediatric)	保育器	18	18	A	-	-	18
E-02	Suction Unit (Pediatric)	10	10	A	-	-					☆		D-02	Suction Unit B	吸引器（小児科） B	10	10	A	-	-	10
E-04	Ambu Bag Set	3	3	B	-	-			○					Ambu Bag Set	蘇生バックセット	3	3	B	-	-	3
E-05	Infusion Pump	10	10	A	-	-					☆		D-03	Infusion Pump	輸液ポンプ	10	10	A	-	-	10

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B/D現地調査終了時							Process of Equipment Selection						Planed Equipment									
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			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	Total
E-07	Sterilizer (Hot air)	4	3	A	1	A	3-1						D-04	Sterilizer (Hot air) B	滅菌器（乾熱）B	3	3	A	-	-	3
E-08	Infant Scale	10	10	B	-	-			○					Infant Scale	乳児体重計	0	0	-	-	-	0
E-09	Neonatal Monitor	4	4	A	-	-					☆		D-05	Neonatal Monitor	新生児モニター	4	4	A	-	-	4
E-10	Srynge Pump	12	12	A	-	-					☆		D-06	Srynge Pump	シリンジポンプ	12	12	A	-	-	12
E-11	Phototherapy Unit	6	6	A	-	-					☆		D-07	Phototherapy Unit	光線治療器	6	6	A	-	-	6
B-03	Ventilator	5	5	A	-	-					☆		D-08	Ventilator A	人工呼吸器 A	5	5	A	-	-	5
B-08	X-Ray Unit (Mobile)	1	1	A	-	-					☆		D-09	X-Ray Unit (Mobile)	X線撮影装置（移動式）	1	1	A	-	-	1
B-07	Ultrasonic Scanner (Portable)	1	1	A	-	-					☆		D-10	Ultrasonic Scanner (Portable)	超音波診断装置（ポータブル）	1	1	A	-	-	1
F-10	CPAP Apparatus	5	5	A	-	-					☆		D-11	CPAP Apparatus	CPAP装置	5	5	A	-	-	5
F-11	Incubator (Transport)	2	2	A	-	-	7				☆		D-12	Incubator (Transport) A	保育器（搬送）A	1	1	A	-	-	1
							7						D-13	Incubator (Transport) B	保育器（搬送、人工呼吸器付）B	1	1	A	-	-	1
F-12	Infantwamer	4	4	A	-	-					☆		D-14	Infantwamer	インファントウォーマー	4	4	A	-	-	4
F. ICU													E. ICU									
F-01	Central Monitor System (8 Beds)	1	1	A	-	-					☆		E-01	Central Monitor System (8 Beds)	セントラル患者モニタシステム（８床）	1	1	A	-	-	1
F-02	Ventilator	5	5	A	-	-					☆		E-02	Ventilator B	人工呼吸器 B	5	5	A	-	-	5
F-03	Defibrillator	1	1	A	-	-					☆		E-03	Defibrillator	除細動器	1	1	A	-	-	1
F-04	Infusion Pump	10	10	A	-	-					☆		E-04	Infusion Pump	輸液ポンプ	10	10	A	-	-	10
F-05	Syringe Pump	10	10	A	-	-					☆		E-05	Syringe Pump	シリンジポンプ	10	10	A	-	-	10
F-07	Resuscitation Set (Soft case)	5	5	C	-	-			○					Resuscitation Set (Soft case)	蘇生バッグ	0	0	-	-	-	0
F-08	Ventilator (Portable)	2	2	A	-	-					☆		E-06	Ventilator (Portable)	人工呼吸器（ポータブル）	2	2	A	-	-	2
F-09	Pulse Oxmeter	3	3	B	-	-			○					Pulse Oxmeter	パルスオキシメーター	0	0	-	-	-	0
B-08	X-Ray Unit (Mobile)	1	1	A							☆		E-07	X-Ray Unit (Mobile)	X線撮影装置（移動式）	1	1	A	-	-	1
B-07	Ultrasonic Scanner (Portable)	1	1	A	-	-					☆		E-08	Ultrasonic Scanner (Portable)	超音波診断装置（ポータブル）	1	1	A	-	-	1
G. Physiotherapy													F. Physiotherapy									
G-01	Low Frequency Therapy Unit	3	3	A	-	-					☆		F-01	Low Frequency Therapy Unit	低周波治療器	3	3	A	-	-	3
G-02	Interferential Therapy Unit	2	2	A	-	-					☆		F-02	Interferential Therapy Unit	干渉波治療器	2	2	A	-	-	2
G-03	Microwave Therapy Unit	2	2	A	-	-					☆		F-03	Microwave Therapy Unit	マイクロ波治療器	2	2	A	-	-	2
G-04	Short-Wave Therapy Unit	2	2	A	-	-					☆		F-04	Short-Wave Therapy Unit	超短波治療器	2	2	A	-	-	2
G-05	Ultrasonic Therapy Unit	2	2	A	-	-					☆		F-05	Ultrasonic Therapy Unit	超音波治療器	2	2	A	-	-	2
G-06	Electric Shock Therapy Unit	2	2	D	-	-		○						Electric Shock Therapy Unit	電気ショック治療器	0	0	-	-	-	0
G-07	Ultraviolet Lamp	2	2	A	-	-					☆		F-06	Ultraviolet Lamp	紫外線ランプ	2	2	A	-	-	2
G-08	Infrared Ray Thermal Unit	2	2	A	-	-					☆		F-07	Infrared Ray Thermal Unit	赤外線治療器	2	2	A	-	-	2
G-09	Infrared Ray Lamp	2	2	A	-	-					☆		F-08	Infrared Ray Lamp	赤外線ランプ	2	2	A	-	-	2
H. Outpatient													G. Outpatient									
H-01	Diagnostic Set	5	-	-	5	A					☆		G-01	Diagnostic Set	診断セット	5	-	-	5	A	5
H-02	Examination Table	10	-	-	10	A	7				☆		G-02	Examination Table A	診察台 A	7	-	-	7	A	7
							7				☆		G-03	Examination Table B	診察台 B	3	-	-	3	A	3
H-03	Examination Light	10	-	-	10	A					☆		G-04	Examination Light	診察灯	10	-	-	10	A	10
H-04	Ultrasonic Neblizer	10	-	-	10	A					☆		G-05	Ultrasonic Neblizer	超音波ネブライザー	10	-	-	10	A	10
H-05	Suction Unit	6	-	-	6	A					☆		G-06	Suction Unit C	吸引器 C	6	-	-	6	A	6
H-07	Sphygmomanometer	10	-	-	10	C			○					Sphygmomanometer	血圧計	0	-	-	0	-	0
H-08	Stethoscope	10	-	-	10	C			○					Stethoscope	聴診器	0	-	-	0	-	0
H-09	IV Stand	2	-	-	2	A			○					IV Stand	点滴台	0	-	-	0	-	0
H-10	Sterilizer	1	-	-	1	A	7				☆		G-07	Sterilizer (Hot air) A	滅菌器（乾熱）A	2	-	-	2	A	2
							7				☆		G-08	Sterilizer (Hot air) B	滅菌器（乾熱）B	2	-	-	2	A	2
H-11	Boiliing Sterilizer	5	-	-	5	C			○					Boiling Sterilizer	煮沸消毒器	0	-	-	0	-	0

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			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	
H-12	Bilirubin Meter	1	-	-	1	A						☆	G-09	Bilirubin Meter	ビリルビンメーター	1	-	-	1	A	1
H-14	Instrument Cabinet	0	-	-	-	-		○						Instrument Cabinet	器材戸棚	0	-	-	0	-	0
H-15	Instrument Cart	2			2	A					☆		G-10	Instrument Cart	器材台車	2	-	-	2	A	2
							3				☆		G-11	Microscope A	顕微鏡 A	3	-	-	3	A	3
							3				☆		G-12	Incubator (Laboratory)	ふ卵器	2	-	-	2	A	2
							3				☆		G-13	Autoclave (Vertical)	オートクレーブ（縦型）	1	-	-	1	A	1
							3				☆		G-14	Water Bath	恒温水槽	1	-	-	1	A	1
							3				☆		G-15	Water Bath (Coagulation test)	恒温水槽（凝固検査）	1	-	-	1	A	1
							3				☆		G-16	PH Meter	ｐＨメーター	1	-	-	1	A	1
							3				☆		G-17	Refract Meter	屈折計	1	-	-	1	A	1
							3				☆		G-18	Spectrophotometer	分光光度計	1	-	-	1	A	1
							3				☆		G-19	Centrifuge (Table top) A	遠心器（卓上）A	1	-	-	1	A	1
							3				☆		G-20	Hematocrit Centrifuge	ヘマトクリット遠心器	1	-	-	1	A	1
							3				☆		G-21	Analytical Scales	分析天秤	2	-	-	2	A	2
							3		○					Slide Staining Set	染色セット	0	-	-	0	-	0
							3				☆		G-22	Hematological Analyzer	自動血球計数装置	1	-	-	1	A	1
							3-1							Sterilizer (Hot air)	滅菌器（乾熱）	0	-	-	0	-	0
							3		○					Scissors	剪刀	0	-	-	0	-	0
							3, 8				☆		G-23	Operating Instrument (Basic)	手術器具（基本）	1	-	-	1	A	1
							3							Scissors (Meztembaum, long)	剪刀（メッツエンバウム、長）	0	-	-	0	-	0
							3		○					Operating Instrument Set (Minor)	手術器具セット（小）	0	-	-	0	-	0
							3, 9				☆		G-24	ECG, 6-Ch	心電計（６チャンネル）	3	-	-	3	A	3
							3				☆		G-25	EEG	脳波計	1	-	-	1	A	1
							3				☆		G-26	X-Ray Film Processor (Table top)	X線フィルム現像器（卓上）	1	-	-	1	A	1
							3, 7				☆		G-27	Gastrofiberscope C	胃ファイバースコープ　C	2	-	-	2	A	2
							7				☆		G-28	Gastrofiberscope D	胃ファイバースコープ　D	1	-	-	1	A	1
							3				☆		G-29	Colonofiberscope B	大腸ファイバースコープ　B	2	-	-	2	A	2
							3		○					Fiberscope Table	軟性鏡検査台	0	-	-	0	-	0
							3				☆		G-30	Fiberscope Suction Unit	軟性用吸引器	1	-	-	1	A	1
							3				☆		G-31	Fiberscope Illuminator	軟性鏡用光源装置	1	-	-	1	A	1
							3				☆		G-32	Fiberscope Cleaning Machine	軟性鏡洗浄器	1	-	-	1	B	1
							3, 9							ECG, 3-Ch	心電計（３チャンネル）	0	-	-	0	-	0
							3				☆		G-33	ECG, 1-Ch	心電計（１チャンネル）	1	-	-	1	A	1
							3				☆		G-34	Electronic Suction Pump	吸引器	2	-	-	2	A	2
							3				☆		G-35	Ultrasonic Scanner	超音波診断装置（婦人科）	1	-	-	1	A	1
							3				☆		G-36	Operating Light (Mobile)	無影灯（移動式）	1	-	-	1	A	1
I. Others													J. Others								
I-01	Sterilizer (Hot air)	5	4	A	1	A	**3-1**				☆		J-01	Sterilizer (Hot air) A	滅菌器（乾熱）A	4	4	A	-	-	4
I-02	Autoclave	2	2	A	-	-					☆		J-02	Autoclave	高圧蒸気滅菌装置	1	1	A	-	-	1
I-03	Laundry Machine	4	4	A	-	-					☆		J-03	Laundry Machine	洗濯機	4	4	A	-	-	4
	Drying Machine	2	2	A	-	-					☆		J-04	Drying Machine	乾燥機	2	2	A	-	-	2
	Press Machine	2	2	A	-	-					☆		J-05	Press Machine (Sheets)	アイロン台（シーツ用）	2	2	A	-	-	2
													J-06	Press Machine (Uniform)	アイロン台（白衣用）	4	4	-			2
I-05	Incinerator	1	1	B	-	-		○						Incinerator	焼却炉	0	0	-	-	-	0
I-06	Ambulance	2	2	A	-	-			○					Ambulance	救急車	0	0	-	-	-	0
I-07	UPS for: operation theater	1	1	A	-	-		○						UPS for: operation theater	無停電電源装置（手術室）	0	0	-	-	-	0

Table 2-11 Details of th Equipment Study and the Planned Equipment List

B/D現地調査終了時							Process of Equipment Selection						Planed Equipment										
Item No.	Genelic title	Q'ty Total	Hospital	Polyclinic			Rearrangement of Equip. List	Deletion of Req. Equip.	Deletion by Budget / Priority	Deletion / Reduction	Category		Item No.	Genelic title	Description	Q'ty Total	Hospital		Polyclinic		Q'ty Total
			Q'ty	Priority	Q'ty	Priority					Replacement	Newly-introduc					Q'ty	Priority	Q'ty	Priority	
I-08	UPS for: intensive care	2	2	A	-	-		○						UPS for: intensive care	無停電電源装置（ICU）	0	0	-	-	-	0
J. Cytogenetics laboratory													H. Cytogenetics laboratory									
J-01	Microscope	2	2	A	-	-					☆		H-01	Microscope B	顕微鏡B	2	2	A	-	-	2
	Microscope (Fluorecent)	1	1	A	-	-					☆		H-02	Microscope (Fluorecent)	顕微鏡（蛍光）	1	1	A	-	-	1
J-02	Cariotyping System	1	1	A	-	-					☆		H-03	Cariotyping System	染色体分析システム	1	1	A	-	-	1
J-04	Laminal Box	1	1	A	-	-				5				Laminal Box	クリーンベンチ	0	0	-	-	-	0
J-05	CO2 Incubator	1	1	A	-	-					☆		H-04	CO2 Incubator	炭酸ガス培養器	1	1	A	-	-	1
J-06	Capilary Electrophoresis system	1	1	A	-	-				4				Capillary Electrophoresis system	電気泳動システム（ｷｬﾋﾟﾗﾘ式）	0	0	-	-	-	0
J-07	Analytical Scales	1	1	A	-	-					☆		H-05	Analytical Scales	分析天秤	1	1	A	-	-	1
J-08	Electrophoresis Box (Vertical)	1	1	A	-	-	11				☆		H-06	Electrophoresis Box	電気泳動装置	1	1	A	-	-	1
J-09	Thermal Cycler	1	1	C	-	-					☆		H-07	Thermal Cycler	サーマルサイクラー	1	1	A	-	-	1
J-10	Refrigerator (low temperature)	1	1	A	-	-	8				☆		H-08	Freezer	フリーザー	1	1	A	-	-	1
J-12	Refrigerator (Pharmaceutical)	2	2	A	-	-					☆		H-09	Refrigerator (Pharmaceutical)	冷蔵庫（試薬）	2	2	A	-	-	2
J-13	Centrifuge (Table top)	1	1	A	-	-					☆		H-10	Centrifuge (Table top)	遠心器（卓上）	1	1	A	-	-	1
J-14	Electrophoresis Box (Horizontal)	1	1	A	-	-	11				☆			Electrophoresis Box (Horizontal)	電気泳動箱（横型）	0	0	-	-	-	0
W. Hemodialysis													W. Hemodialysis									
W-1	Hemodialysis Apparatus	6	6	A	-	-	7			3	☆		I-01	Hemodialysis Apparatus A	透析装置A	2	2	A	-	-	2
							7				☆		I-02	Hemodialysis Apparatus B	透析装置B	2	2	A	-	-	2
W-2	Peritoneal Dialysis Apparatus	3	3	A	-	-				3	☆		I-03	Peritoneal Dialysis Apparatus	腹膜透析装置	2	2	A	-	-	2
W-3	Water Treatment System	1	1	A	-	-					☆		I-04	Water Treatment System	水処理システム	1	1	A	-	-	1
W-4	Plasmapheresis Apparatus	2	2	A	-	-				3	☆		I-05	Plasmapheresis Apparatus	血漿交換装置	1	1	A	-	-	1
W-5	Hemosorbtion Apparatus	1	1	A	-	-					☆		I-06	Hemosorbtion Apparatus	血液吸着装置	1	1	A	-	-	1
B-03	Ventilator	1	1	A	-	-					☆		I-07	Ventilator	人工呼吸器	1	1	A	-	-	1
B-18	Defibrillator	1	1	A	-	-					☆		I-08	Defibrillator	除細動器	1	1	A	-	-	1

Process of Equipment Selection

Rearrangement of Equipment List

1. Gynecology → Surgery
1-1. Operating Table → Surgery
1-2. Electrosurgical Unit → Surgery
1-3. Infusion Pump → Surgery
2. Pediatric → Neonatology
3. Polyclinic → Outpatient
3-1. Sterilizer（I-01, E-07, B-20）→ G-07, G-08
4. Pulse Oximeter（B-06）→ Function Diagnostic
5. Deletion of Hemoglobin Meter by functional dupulication with Hematology Analyzer
6. Instruments for operation（B-13〜B-18）→ Operating Instruments (Basic)
7. Separated by difference of specifications
8. Changed discription
9. Electrocardiograph 3ch → Electrocardiograph 6ch
10. 2 Autoclaves → 1 Autoclave System
11. Electrophoresis Box (Vertical), (Horizontal) → Electrophoresis Box

Chapter 3 Implementation Plan

Chapter 3 Implementation Plan

3-1 Implementation Plan

3-1-1 Implementation Concept

In accordance with the framework of grant aid system of the government of Japan, the implementation of this project will consist of the basic procedure outlined below.

This project will get into the implementation stage following an Exchange of Notes between the government of Japan and the government of Ukraine, after the project has been approved by the Japanese cabinet. The Exchange of Notes needs to be ratified by the Ukrainian Diet in advance of the official implementation of the project.

Following conclusion of the Exchange of Notes between the two governments, a consulting firm which is a Japanese corporation recommended by the Japan International Cooperation Agency (JICA) will conclude a consulting agreement with the Ministry of Health of Ukraine. This agreement will come into effect on verification by the Japanese government. Based on this agreement, the consultant will then implement the process of tendering bids and supervising the supply and installation work for the project.

With regard to the procurement of equipment, a supplier which is a Japanese corporation will be selected by means of bids tendered, and will conclude a contract with the Ministry of Health of Ukraine to supply equipment. This contract will also come into effect on verification by the Japanese government. The supplier will procure, transport, and install the equipment, and will also instruct personnel in the operation, maintenance and management of the equipment, and will provide manuals and lists of manufacturers and agents.

The Ministry of Health will serve as the responsible ministry in Ukraine for this project, and the executing agency will be the Ukrainian Children's Specialized Hospital "OKHMATDET".

3-1-2 Implementation Conditions

(1) How medical treatment activities will be affected

Large numbers of patients are seen on a daily basis at the hospital. When bringing the equipment into the hospital and installing them, the concerning parties including the hospital staff should give their ample consideration to the schedules, in order to minimize any disruption of medical care activities, including noise.

(2) Implementation schedule within the effective period of the Exchange of Notes

Generally, a Japanese grant aid project proceeds rapidly to the implementation stage once the exchange of notes has been completed between the two governments. With this project, however, the Exchange of Notes needs to be ratified by the Ukrainian Diet because Ukrainian regulation provides that an official document stipulating tax exemption must be ratified by the Diet. Consequently, the signing of the consultant agreement and the subsequent overall process must be started after the ratification has been completed.

3-1-3 Scope of Works

(1) Government of Japan

1) Expenses incurred in procuring equipment for the project
2) Expenses incurred for sea freight of the equipment, and land transportation to the targeted facility
3) Expenses incurred for installing and setting up the equipment
4) Expenses incurred for the test runs of the procured equipment, and the technical training of operation and maintenance of it

(2) Ministry of Health of Ukraine

1) Supplying information and documents necessary for installation and setting up the equipment
2) Removal of old equipment from locations where new equipment is to be installed, and indoor refurbishing following removal of the equipment
3) Assuring a location where the procured equipment can be unloaded
4) Providing a place where the equipment can be stored until it is installed
5) Securing the physical condition to carry the procured equipment into rooms of the hospital buildings

3-1-4 Consultant Supervision

After implementing the bid tendering process by which the equipment supplier will be chosen, the consultant will supervise the work to assure that procurement and installation of the equipment proceed smoothly. The aim of the consultant's supervision is to assure appropriate implementation of the contract between the supplier and the Ministry of Health of Ukraine, namely the project under the grant aid cooperation by the government of Japan.

In the course of supervising of the work, the consultant will confirm that the contents of the procured equipment, the means of transportation, the installation and setup work, and explanations of operation following installation of the equipment match the contents of the contract documents, and if necessary, will provide guidance and assistance to the supplier and the Ministry of Health of Ukraine. The consultant will also maintain a constant awareness of

the status and progress at each stage of the project, and will report to the concerning parties of both countries.

The consultant will assign a project manager and equipment planner to supervise the project work.

3-1-5 Procurement Plan

(1) The possibility of third-country product procurement

It may be necessary to procure some of the equipment from third countries as the result of the local procurement relating to the equipment planned for this project. Specifically the equipment that will require local agents to provide consumable items and technical services, it is thought that it will be necessary to procure laboratory equipment and hemodialistic apparatus, in particular, from Europe or the United States.

With regard to the procurement of products from third countries, an official request from the Ministry of Health of Ukraine to the government of Japan is necessary in advance of the tender stage of the project. The request is subject to approval by the Japanese government.

(2) Route and period of transportation of the equipment

Equipment to be procured from Japan will be shipped from Yokohama Port to Odessa Port in Ukraine by sea, and from there will be transported to Kiev using inland shipping. It will undergo customs processing in Kiev. It is thought that about 40 days will be required for the sea shipping and 10 days for inland transportation and customs, so that a total period of around 50 days will be required for shipping.

Equipment procured in Europe will be shipped to a central gathering point in Hamburg and then transported overland to Kiev. It is estimated that about 15 days will be required for transportation, including customs procedures. Items procured in the United States will be shipped by sea from New York to Hamburg, and from there will follow the same route as those procured in Europe. There are numerous ships traveling regularly between New York and Hamburg, so sea shipments will take around 10 to 15 days. Consequently, the maximum transportation period for equipment procured in Europe and the United States is considered to be approximately 30 days.

3-1-6. Implementation Schedule

The period of implementation of this project, following an exchange of notes between the two governments and the ratification by the Ukrainian Diet, will be divided into two stages, that of bid tendering and that of procurement/installation of the equipment. After the exchange of notes has been concluded, the period of implementation until the installation work has been completed will be as indicated in Figure 3-1.

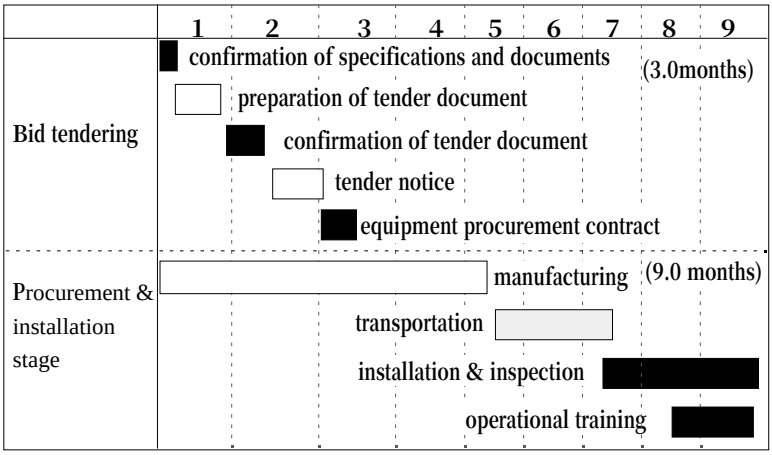

Figure 3-1. Implementation Schedule

(1) Bid tendering

The process of tendering bids requires the final confirmation of specifications and other documents, drafting of drawings, tender notice, distribution of tender documents, the bidding, evaluation of the bidding results, negotiation of the equipment procurement contract, and signing of the equipment procurement contract, and will require a period of three months.

(2) Equipment procurement and installation construction

After the equipment procurement agreement has been signed between the Ministry of Health of Ukraine and the equipment supplier, and has been verified by the government of Japan, procurement of the equipment will be initiated. From procurement of the equipment to completion of the installation, and for transfer to the Ukrainian government and completion, will require a period of nine months.

3-1-7 Obligations of Recipient Country

Items involved in the implementation of this project for which expenses are to be borne by Ukraine are as indicated in the implementation classifications shown in section 4-1-3, but it will be necessary to implement the items listed below separately, as appropriate.

1) Ratification of the exchange of notes by the Ukrainian Diet

2) Release of the necessary information and documents
3) Procedures to ensure smooth passage of the procured equipment through customs in Ukraine / necessary arrangements for domestic transportation
4) Exemption from customs duties and taxation for those persons involved in the supply of equipment and provision of services
5) Accordance of necessary facilities and assurance of safety for Japanese nationals delivering the equipment or providing services related to the implementation of this project
6) Bearing of expenses for procedures of Banking Arrangements(B/A) and irrevocable Authorization to Pay(A/P)
7) Deployment of necessary personnel and budget to assure effective implementation of the project (including O/M costs for equipment being procured through grant aid cooperation of Japan)
8) Appropriate and effective maintenance and management of the equipment procured based on the project, and bearing of expenses
9) Issuance of permits, licenses and other authorizations needed for the implementation os this project
10) Bearing of expenses incurred for procedures for exemption from taxation
11) Bearing of any other expenses required in order to implement this project, outside of those in the range listed above

3-2 Project Cost Estimation

(1) Expenses to be borne by Ukraine

Contents of renovation Wirk.

ork,

	Amount
CT scanner room renovation expen	30,000 Hryvnia
Expenses for renovation of the laundry	30,000 Hryvnia
Total	60,000 Hryvnia

(2) Estimate conditions

1) Estimate conditions	May, 2000
2) Exchange rates	1 US$ =106.23 yen 1 DM = 54.98 yen
3) Construction period	Twelve months
4) Ordering method	Bundled in a lot
5) Other	This project must be implemented in accordance with the system established for grant aid cooperation by the government of Japan.

3-3 Maintenance Management Planning

Aside from partial supplementary funding, the operating budget for this facility comes from a special budget set aside by the Ministry of Health for hospitals. In 1999, the hospital received 25.2% of that budget, and the scope of the budget allocated to the hospital out of the overall funding by the Ministry of Health for medical care facilities was 4.7%. In 1999, expenses for drugs, consumable items and reagents amounted to 2,185,500 Hryvnia (approximately 43 million yen), and maintenance expenses came to 904,500 Hryvnia (approximately 18 million yen), so the total expenses for maintenance management of the existing supplies and equipment were calculated at 3,091,000 Hryvnia (approximately 61 million yen).

The amount deemed necessary for maintenance management of the facility under these conditions is as shown in Table 3-1, with 22.18 million yen allotted for reagents and consumable items, including standard fluids for testing machines, recording paper for EKG and EEG machines, and film for X-ray machines. The total amount required for accessories, including tubes and bulbs for CT scanners and X-ray machines, comes to 6.76 million yen.

Most of the supplies and equipment, however, consist of updated and renovated items for this project, and anticipated expenses for reagents and consumable items in the first fiscal year can be met with the budget for the drugs, reagents, and consumable items for existing equipment. Also, because equipment that tends to break down will be updated through this project, the current maintenance expenses for existing equipment can be reduced.

Also, accessories are calculated starting at a point two years after this project is implemented, and the Ministry of Health, which is the partner agency in this project, has promised to provide a budget for maintenance management expenses deemed necessary in the future.

Table 3-1. Maintenance management expenses following project implementation

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
A-15	pH METER	3	Standard KCl solusion	3,000	4	12,000		Days : 300days
			Electrode filing solution	3,000	4	12,000		Times : 30tests/day
			Buffer powder, PH4, 7, 10 each	6,000	10	60,000		
			Battery	2,600	2	5,200		
					Item	**89,200**	**267,600**	

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
					price			
A-17	ELECTROLYTE ANALYZER	2	Standard regent kit	28,000	6	168,000		Days : 300days
			Cleaning solution	6,000	2	12,000		Times : 30tests/day
			Pump tube set	2,500	1	2,500		
			Paper, 10pcs./pack	5,200	4	20,800		
			Na electrode	65,000	1	65,000		
			K electrode	40,000	1	40,000		
			Ca electrode	40,000	1	40,000		
			Reference electrode	75,000	1	75,000		
					Item price	**348,300**	**696,600**	
A-19	SPECTROPHOTOMETER	4	Lamp	5,000	1	5,000		Days : 300days
			Sipper tube	11,000	2	22,000		Times : 150tests/day
			Fuse, internal tubing set , etc.	5,000	2	10,000		
					Item price	**37,000**	**148,000**	
A-21	HEMATOCRIT CENTRIFUGE	6	Heparinized capillary tube,1000ps.	6,000	9	54,000		Days : 300days
			Seal pate	1,500	12	18,000		Times : 30tests/day
			Carbon Brush	2,000	3	6,000		
					Item price	**78,000**	**468,000**	
A-25	BIOCHEMICAL ANALYZER	1	Regents set (Local price)	33,000	12	396,000		Days : 300days
			Paper, 10pcs./pack (Local price)	1,000	12	12,000		Total test : 3000tests/month
			Tubes, etc.	10,000	2	20,000		
					Item price	**408,000**	**816,000**	
A-27	HEMATOROGY ANALYZER	3	Regent pack	24,000	20	480,000		Days : 300days
			Cleaning solution	2,000	10	20,000		Times : 50tests/day
			Paper, 5pcs./pack (Local price)	1,000	24	24,000		
			Control sample kit	24,000	6	144,000		
			Tubes, etc.	10,000	2	20,000		
					Item price	**688,000**	**2,064,000**	
B-02	ANESTHETIC APPARATUS	4	Sodasorb, 5kg/pack	5,000	4	20,000		Days : 300days, 1patient/day
					Item price	**20,000**	**80,000**	
B-06	X-RAY UNIT (Mobile)	1	Films, 100 pcs./pack (Local price)	80	5,000	400,000		Days : 300days, 10exam./day
					Item price	**400,000**	**400,000**	
B-08	OPERATING MONITOR	5	Paper, 50mm x 30m (Local price)	80	50	4,000		Days : 300days, 1patient/day
			Disposable electrode (Local price)	30	1,200	36,000		
			Patient cable	5,000	1	5,000		
			Temperature probe	15,000	1	15,000		
			NIBP cuff	4,000	2	8,000		
					Item price	**68,000**	**340,000**	
B-16	DEFIBRILLATOR	3	Disposable electrode (Local price)	30	900	27,000		Days : 3times/week x 50weeks
			Gel, 100g/tube (Local price)	100	12	1,200		Total times : 150times

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
			Paper, 50mm x 30m (Local price)	60	50	3,000		
			Patient cable	10,000	1	10,000		
			Rechargerble battery	10,000	1	10,000		
					Item price	**51,200**	**153,600**	
B-52	OPERATING LIGHT (CEILING TYPE)	4	Halogen blub	5,200	6	31,200		Days : 300days
					Item price	**31,200**	**124,800**	
C-01	ECG, 6-CH	3	Paper, 145mm x 30m (Local price)	300	100	30,000		Days : 300days, 10exam./day
			ECG paste, 100g/tube (Local price)	100	40	4,000		
			Patient cable	10,000	1	10,000		
			Limb electrode, 4pcs./pack	4,000	1	4,000		
			Chest electrode, 6pcs./pack	4,000	1	4,000		
			Rechargerble battery	9,000	1	9,000		
					Item price	**61,000**	**183,000**	
C-02	EEG	2	Paper, 300m	4,000	30	120,000		Days : 300days, 3exam./day
			EEG paste, 400g/tube (Local price)	1,000	6	6,000		
			Recording ink, 400cc (Local price)	1,500	6	9,000		
			Skin paste	1,300	6	7,800		
			EEG electrode, 12pcs./set	10,000	1	10,000		
					Item price	**152,800**	**305,600**	
C-03	DIAGNOSTIC X-RAY SYSTEM	1	Films, 100 pcs./pack (Local price)	80	5,000	400,000		Days : 300days, 20exam./day
			X-ray tube	4,000,000	0.5	2,000,000		
					Item price	**2,400,000**	**2,400,000**	
C-04	CT SCANNER	1	Films, 100 pcs./pack (Local price)	80	6,000	480,000		Days : 300days, 5exam./day
			X-ray tube	7,000,000	0.5	3,500,000		
			Developer & Fixer solution	70	8,000	560,000		
					Item price	**4,540,000**	**4,540,000**	
C-06	X-RAY FILM PROCESSOR (Table Top)	2	Developer & Fixer solution	70	5,000	350,000		Days : 300days
					Item price	**350,000**	**700,000**	
C-19	ULTRASONIC SCANNER (Color Doppler)	1	Jerry, 1L (Local pricre)	600	30	18,000		Days : 300days, 10exam./day
			Printer paper	2,000	36	72,000		
					Item price	**90,000**	**90,000**	
C-20	ECG, 6-CH	1	Paper, 145mm x 30m (Local price)	300	100	30,000		Days : 300days, 10exam./day
			ECG paste, 100g/tube (Local price)	100	40	4,000		
			Patient cable	10,000	1	10,000		
			Limb electrode, 4pcs./pack	4,000	1	4,000		

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
			Chest electrode, 6pcs./pack	4,000	1	4,000		
			Rechargerble battery	9,000	1	9,000		
					Item price	**61,000**	**61,000**	
C-21	ECG, 1-CH	3	Paper, 50mm x 30m (Local price)	80	300	24,000		Days : 300days, 10exam./day
			ECG paste, 100g/tube (Local price)	100	50	5,000		
			Patient cable	10,000	1	10,000		
			Limb electrode, 4pcs./pack	4,000	1	4,000		
			Chest electrode, 6pcs./pack	4,000	1	4,000		
			Rechargerble battery	9,000	1	9,000		
					Item price	**56,000**	**168,000**	
D-02	INFUSION PUMP FOR PEDIATRIC USE	10	Infusion tube	250	300	75,000		Days : 300days
					Item price	**75,000**	**750,000**	
D-08	ULTRASONIC SCANNER	1	Jerry, 1L (Local pricre)	600	30	18,000		Days : 300days, 10exam./day
			Printer paper	2,000	36	72,000		
					Item price	**90,000**	**90,000**	
E-04	INFUSION PUMP FOR PEDIATRIC USE	10	Infusion tube	250	300	75,000		Days : 300days
					Item price	**75,000**	**750,000**	
E-07	NEONATAL MONITOR	4	Paper, 50mm x 30m (Local price)	80	100	8,000		Days : 300days, 1patient/day
			Disposble electrode (Local price)	30	1,200	36,000		
			Patient cable	5,000	1	5,000		
			Temperature sensor	15,000	1	15,000		
			NIBP cuff	4,000	2	8,000		
			CO2 sensor	50,000	1	50,000		
					Item price	**122,000**	**488,000**	
E-08	SYRINGE INFUSION PUMP	12	Syrige, 20cc	50	150	7,500		Days : 360days
			Syrige, 50cc	60	150	9,000		
			Connecting tube	150	200	30,000		
					Item price	**46,500**	**558,000**	
E-12	ULTRASONIC SCANNER (Portable)	1	Jerry, 1L (Local pricre)	600	30	18,000		Days : 300days, 10exam./day
			Printer paper	2,000	36	72,000		
					Item price	**90,000**	**90,000**	
F-01	CENTRAL PATIENT MONITOR SYSTEM, 8 BEDS	1	Paper, 50mm x 30m (Local price)	80	720	57,600		Days : 360days, 2paper roll x 360days
			Disposble electrode (Local price)	30	9,000	270,000		
			Patient cable	5,000	8	40,000		
			Temperature sensor	15,000	8	120,000		
			NIBP cuff	4,000	8	32,000		
					Item price	**519,600**	**519,600**	
F-03	DEFIBRILLATOR	1	Disposable electrode (Local price)	30	900	27,000		Days : 3times/week x 50weeks

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
			Gel, 100g/tube (Local price)	100	12	1,200		Total times : 150times
			Paper, 50mm x 30m (Local price)	60	50	3,000		
			Patient cable	10,000	1	10,000		
			Rechargerble battery	10,000	1	10,000		
					Item price	**51,200**	**51,200**	
F-04	INFUSION PUMP FOR PEDIATRIC USE	10	Infusion tube	250	300	75,000		Days : 300days
					Item price	**75,000**	**750,000**	
F-05	SYRINGE INFUSION PUMP	10	Syrige, 20cc	50	150	7,500		Days : 360days
			Syrige, 50cc	60	150	9,000		
			Connecting tube	150	200	30,000		
					Item price	**46,500**	**465,000**	
F-10	ULTRASONIC SCANNER (Portable)	1	Jerry, 1L (Local pricre)	600	30	18,000		Days : 300days, 10exam./day
			Printer paper	2,000	36	72,000		
					Item price	**90,000**	**90,000**	
H-04	ULTRASONIC NEBLIZER	10	Bacteria filter	600	6	3,600		Days : 300days
			Solution cap	700	12	8,400		
						12,000	**120,000**	
H-11	BILI RUBIN METET	1	Standard solution	1,600	6	9,600		Days : 300days, 20exam./day
			Capillary tube, 1000ps./pack	6,000	6	36,000		
					Item price	**45,600**	**45,600**	
J-09	THRMAL CYCLER	1	PCR regent kit, 100tests/kit	62,000	1	62,000		Total tests : Approx. 100tests/year
			Restriction enzyme set	60,000	2	120,000		
			DNA probe for diagnostics, 20tests/kit	15,000	5	75,000		
						257,000	**257,000**	
W-01	Hemodialysis Apparatus	4	Blood line and dialyzer (Local price)	2,000	600	1,200,000		Days : 300days, 2patient/day
			Concentrate solution (Local price)	100	600	60,000		
					Item price	**1,260,000**	**5,040,000**	
W-02	Peritoneal Dialysis Apparatus	2	Peritoneal dialysis line (Local price)	1,500	300	450,000		Days : 300days, 1patient/day
			Solution (Local price)	900	300	270,000		
			Catheter (Local price)	6,000	1	6,000		
			Adapter set (Local price)	9,800	1	9,800		
					Item price	**735,800**	**1,471,600**	
W-03	Water Treatment System	1	Ion resin	10,000	1	10,000		Days : 360days
			Filter	250	2	500		
			RO module	150,000	2	300,000		
					Item price	**310,500**	**310,500**	
W-04	Plasmapheresis Apparatus	1	Filter (Local price)	14,000	150	2,100,000		Days : 300days, 0.5patient/day
			Blood line and dialyzer (Local price)	4,300	150	645,000		

Item No.	Description	Item Q'ty	Contents	Unit price (¥)	Contents Q'ty	Price (Unit price x contents Q'ty)	Amount (Item Q'ty x Item price)	Working condition & Remarks
					Item price	**2,745,000**	**2,745,000**	
W-05	Hemosorbtion Apparatus	1	Carbon column	800	300	240,000		Days : 300days, 1patient/day
			Blood line (Local price)	200	300	60,000		
					Item price	**300,000**	**300,000**	
W-07	DEFIBRILLATOR	1	Disposable electrode (Local price)	30	900	27,000		Days : 3times/week x 50weeks
			Gel, 100g/tube (Local price)	100	12	1,200		Total times : 150times
			Paper, 50mm x 30m (Local price)	60	50	3,000		
			Patient cable	10,000	1	10,000		
			Rechargerble battery	10,000	1	10,000		
					Item price	**51,200**	**51,200**	

	TOTAL AMOUNT						**28,948,900**	

＜Breakdown＞

Consumable and Regents	Total Amount	22,188,900

Repear parts	Total Amount	6,760,000

The technical level of the hospital with regard to maintenance management of medical equipment is as follows.

- Maintenance budget

Prior to the collapse of the former Soviet Union, there was sufficient budget at the hospital for upgrading and renovating equipment that had deteriorated, and new items were being purchased on an ongoing basis, so that the hospital was functioning smoothly. Since Ukraine gained its independence, however, insufficient funding has resulted in a significant decrease in the funds for purchasing new equipment, and it has become also difficult to maintain and continue using equipment that has nearly deteriorated. Ukraine's government is trying to increasing machinery maintenance funds and dealing with the situation.

-High position and technical level of the maintenance staff in the hospital

There are 5 Deputy directors of the hospital and one of the director is the Maintenance Management Division engineer. He supervises 46 engineers and technicians. Of these, there are a total of four engineers and technicians who are specialists in medical equipment, and 24 engineers in charge of electronic and electrical areas, as well as drainage sanitation, so 28 engineers and technicians are responsible for conducting daily inspections and maintenance management. The division uses lathes and ball lathes to manufacture some of the mechanical parts that are not obtainable. The engineering level of the division is

extremely high, and it is judged that the division is entirely capable of carrying out maintenance management of the various equipment and machinery items planned for this project.

-Availability of spare parts and consumables

It is becoming increasingly difficult to acquire genuine spare parts and consumables for equipment manufactured in the former Soviet Union or Eastern Europe. Many of these countries were thrown into confusion following the breakup of the Soviet Union, and many manufactures of medical equipment stop their productions, making it impossible to supply parts. Even if manufacturing continued, it became difficult to acquire parts because the countries were no longer members of the former Soviet Union, and orders were thus handled as imports rather than domestic shipments, requiring foreign currencies that was in short supply. More recently, however, some test reagents, test tubes, record forms, disposable electrodes, fluid tubes, syringes, and other items are now being manufactured in Ukraine, and domestic goods are becoming more widely available at low prices.

The maintenance management situation with regard to medical equipment manufactured in Japan and Western Europe is as follows in Ukraine.

There are numerous domestic agents and marketing agents for medical equipment manufactured in Japan and Western Europe, including equipment related to clinical testing, diagnosis, and radiology. Many of the engineers at those agencies have undergone training at laboratories of the various manufacturers, and can carry out daily inspection, failure analysis, and repair of the equipment themselves. Secure supply routes have also been established for spare parts and consumables. Also, many of the local agents have set up industrial tie-ups with European production bases (many of these are in Germany, Austria, Sweden, and other countries), as well as with Moscow branches. Thus, when equipment is introduced and installed, the local agencies in Ukraine are capable of installing and setting it up, as well as handling maintenance and repair. More advanced repairs are handled by engineers dispatched from Europe or Moscow. Thus, there is a clear division of responsibilities and roles, and the maintenance service organization in Ukraine is judged to be outstanding.

The heads of the various divisions of the hospital such as clinical laboratory, diagnostic testing, and radiology are familiar with obtaining spare parts and consumables from the local agents. They make the request of purchasing them to the deputy director of the hospital when necessary. For instance, over 30 local agents in Ukraine have business records with the hospital regarding pharmaceuticals and medical supplies. Because those agents can easily supply foreign-made spare parts and consumables, the hospital does not need to place orders directly with overseas manufacturers

Additionally, as equipment manufactured in Europe and the United States comes into wide use, more consumables that meet those standards are being manufactured domestically. It is anticipated that a more stable supply of these items will be available in the future at lower prices.

Given these fortuitous circumstances, the equipment provided by supporting committees from Japan or grant aid from Switzerland is operating well, and is being maintained with no problems. It is certain that the equipment procured through this project also can be operated and maintained satisfactorily with the hospital's capabilities and the market environment in Ukraine.

Chapter 4 Project Evaluation and Recommendation

Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

The objective of this project is to upgrade and supplement existing machinery and equipment that has deteriorated at the Ukrainian Children's Specialized Hospital "OKHMATDET", which is a top referral institution in the field of pediatric care in Ukraine, that cannot be procured with budget funding by the Ministry of Health because of the economic crisis, and thereby to restore and refurbish the essential function of the hospital. When machinery is selected, it will be selected in keeping with priority planning in the field of pediatric care in Ukraine, and with consideration given to the personnel, medical treatment technology and maintenance management planning at the hospital, in accordance with the framework of Japan's grant aid cooperation, and will also be selected with consideration given to environmental factors, making sure that there are no adverse effects on the environment from the machinery and equipment. Through the implementation of this project, the results noted below are expected, and the scope is such that the appropriateness of Japan's grant aid cooperation can be adequately verified.

A. Strengthening of the capacity to accommodate paediatric patients, including premature infants, and improvement of diagnostic standards in Ukraine

The hospital will be able to diagnose and supply the high-level medical care appropriate to its position as Ukraine's top referral institution for approximately 16,000 inpatients and approximately 360,000 outpatients annually, including approximately 2,500 patients in the premature ICU. It will also offered improved diagnostic capabilities as a pediatric emergency center in the west part of Kiev, where 6,400 patients can be accommodated each year, and approximately 7,000 patients undergo periodic examination because they have suffered the effects of the accident at Chernobyl. Thus, the ability of the institution to accommodate patients will be significantly improved.

B. Reduction in maintenance management expenses for medical equipment and machinery

Currently, aged and deteriorating equipment is causing increasingly high repair costs, but because approximately 90% of the equipment planned for procurement under this project will be replaced and upgraded existing, even though budgetary means will need to be found for spare parts for the equipment replaced as a result of this project, it is expected that maintenance expenses for repairs of existing machinery and equipment will be reduced.

C. Strengthening the referral system in Ukraine

If the level of diagnostic services can be improved at the Ukrainian Children's Specialized Hospital "OKHMATDET" which is Ukraine's last resort in pediatric medicine, the hospital will be able to accept critical cases from the 109 primary and secondary pediatric hospitals nationwide, and to accept cases for special examination and testing. The ability to provide backup support in these ways will contribute to the overall improvement of the pediatric medical services supply system throughout Ukraine, through means such as educating physicians specializing in pediatric care and dispatching them to other hospitals and facilities throughout the country.

4-2 Recommendation

As stated earlier, numerous results can be expected from this project, and at the same time, the project will contribute significantly to improved health care services in the field of pediatric medicine in Ukraine. Because of this, the appropriateness of implementing the project using grant aid cooperation has been verified. In addition, it is thought that Ukraine will have no problems providing the sufficient personnel and capital for management and operation of the Project. If the items listed below can be improved on and serviced, however, the effect of the Project will be enhanced.

Items thought to particularly require improvement and servicing are as follows:

A. With health and medical care budgets being cut back in Ukraine, in order to assure sound maintenance management of the facilities from a financial standpoint, it is desirable to introduce a health insurance system.

B. Maintenance funds formerly required for aged and deteriorating equipment will be used for contracts, which will be set up with agencies for the machinery and equipment procured in the Project.

C. Not only machinery, but also facilities, especially electrical facilities and drainage sanitation facilities, will be renovated and upgraded, in an attempt to assure a stable supply of energy with which to run the machinery and equipment.

Appendices

[Appendices]

1. Member List of the Survey Team

(1) Basic Design Study (February 7 ~ March 12, 2000)

Mr. Satoshi NAKANO	【Team Leader】	Project Monitoring and Coordination Division Grant Aid Management Department Japan International Cooperation Agency
Mr. Kazuhiro ABE	【Project Manager】	International Techno Center Co., Ltd.
Mr. Toshihiko MATSUKI	【Equipment Planner】	International Techno Center Co., Ltd.
Mr. Shigetaka TOJO	【Facility Planner】	International Techno Center Co., Ltd.
Mr. Naoki MIMURO	【Cost and Procurement】	International Techno Center Co., Ltd.
Ms. Hiromi WATANABE	【Interpreter】	International Techno Center Co., Ltd.

(2) Explanation of Draft Final Report (May 5 ~ May 28, 2000)

Mr. Toshiyuki IWAMA	【Team Leader】	Second Project Management Division Grant Aid Management Department Japan International Cooperation Agency
Mr. Kazuhiro ABE	【Project Manager】	International Techno Center Co., Ltd.
Mr. Toshihiko MATSUKI	【Equipment Planner】	International Techno Center Co., Ltd.
Mr. Naoki MIMURO	【Cost and Procurement】	International Techno Center Co., Ltd.
Ms. Hiromi WATANABE	【Interpreter】	International Techno Center Co., Ltd.

2．Survey Schedule

1) Basic Design Study

NO.	Date	Day	Survey Schedule
1	February 7	Mon.	10：55 Departure from Narita (LH711)
			16：30 Arrival at Frankfurt
2	February 8	Tue.	10：20 Departure from Frankfurt (LH3372)
			14：00 Arrival at Kiev
			19：00 Courtesy call – Embassy of Japan in Ukraine
3	February 9	Wed.	10：00 Courtesy call and Meeting - MOH
			14：00 Courtesy call and Meeting - NAUDEI
4	February 10	Thu.	10：00 Courtesy call and Meeting – Ohmatdyt Hospital
5	February 11	Fri.	09：00 Meeting – Ohmatdyt Hospital (Polyclinic)
6	February 12	Sat.	09：00 Meeting and Survey – Ohmatdyt Hospital
7	February 13	Sun.	10：00 Meeting within the team
8	February 14	Mon.	10：00 Meeting UNDP office in Ukraine
			11：30 Meeting WHO office in Ukraine
9	February 15	Tue.	09：30 Meeting and Survey – Ohmatdyt Hospital
			10：00 Discussion about Minutes - MOH
10	February 16	Wed.	09：30 Discussion about Minutes - MOH
			14：00 Sign of Minutes
			15：00 Meeting and Survey – Ohmatdyt Hospital
11	February 17	Thu.	11：00 Courtesy call – Embassy of Japan in Ukraine
			14：00 Meeting and Survey – Ohmatdyt Hospital
12	February 18	Fri.	09：30 Meeting and Survey – Ohmatdyt Hospital
			10：30 Meeting and Survey – Ohmatdyt Hospital (Polyclinic)
13	February 19	Sat.	10：00 Meeting within the team
14	February 20	Sun.	10：00 Meeting within the team
15	February 21	Mon.	09：30 Meeting and Survey – Ohmatdyt Hospital
16	February 22	Tue.	09：30 Meeting and Survey – Ohmatdyt Hospital
17	February 23	Wed.	09：30 Meeting and Survey – Ohmatdyt Hospital (Polyclinic)
18	February 24	Thu.	10：00 Meeting and Survey – Ohmatdyt Hospital
19	February 25	Fri.	09：30 Meeting and Survey – Ohmatdyt Hospital
			10：00 Meeting - MOH
20	February 26	Sat.	10：00 Meeting within the team
21	February 27	Sun.	10：00 Meeting within the team
22	February 28	Mon.	09：30 Meeting and Survey – Ohmatdyt Hospital
			14：00 Survey and Meeting –Relative institution
23	February 29	Tue.	09：30 Meeting and Survey – Ohmatdyt Hospital
			14：00 Meeting and Survey – Ohmatdyt Hospital (Polyclinic)
24	March 1	Wed.	09：30 Meeting and Survey – Ohmatdyt Hospital
25	March 2	Thu.	09：30 Meeting and Survey – Ohmatdyt Hospital (Polyclinic)
			14：00 Meeting and Survey – Ohmatdyt Hospital

NO.	Date	Day	Survey Schedule
26	March 3	Fri.	09：30 Meeting and Survey – Ohmatdyt Hospital
27	March 4	Sat.	10：00 Meeting within the team
28	March 5	Sun.	10：00 Meeting within the team
29	March 6	Mon.	09：30 Meeting and Survey – Ohmatdyt Hospital
30	March 7	Tue.	09：30 Survey and Meeting – Relative institution
			10：30 Meeting - MOH
			11：30 Meeting and Survey – Ohmatdyt Hospital
31	March 8	Wed.	10：00 Meeting within the team
32	March 9	Thu.	09：30 Meeting and Survey – Ohmatdyt Hospital
			15：00 Courtesy call – Embassy of Japan in Ukraine
33	March 10	Fri.	09：30 Meeting and Survey – Ohmatdyt Hospital
			14：10 Departure from Kiev (LH3261)
			16：00 Arrival at Frankfurt
34	March 11	Sat.	14：00 Departure from Frankurt
35	March 12	Sun.	08：30 Arrival at Narita

2) Explanation of Draft Final Report

NO.	Date	Day	Survey Schedule
1	May 13	Sat.	14：10 Departure from Narita (LH715)
			18：50 Arrival at Frankfurt
2	May 14	Sun.	10：20 Departure from Frankfurt(LH3372)
			14：00 Arrival at Kiev
3	May 15	Mon.	10：45 Courtesy call – Embassy of Japan in Ukraine
			11：30 Courtesy call and Meeting - MOH
			13：00 Meeting and Survey – Ohmatdyt Hospital
4	May 16	Tue.	15：00 Courtesy call and Meeting - MOF
5	May 17	Wed.	09：30 Meeting and Survey – Ohmatdyt Hospital (Polyclinic)
6	May 18	Thu.	09：30 Meeting and Survey – Ohmatdyt Hospital
7	May 19	Fri.	09：00 Meeting - MOH
			14：00 Meeting and Survey – Ohmatdyt Hospital
8	May 20	Sat.	10：00 Meeting within the team
9	May 21	Sun.	10：00 Meeting within the team
10	May 22	Mon.	10：30 Courtesy call – Embassy of Japan in Ukraine
			12：00 Courtesy call and Meeting - MOH
			13：00 Meeting and Survey – Ohmatdyt Hospital
			15：00 Courtesy call and Meeting - MOF
11	May 23	Tue.	09：30 Meeting and Survey – Ohmatdyt Hospital
			14：00 Discussion about Minutes - MOH
12	May 24	Wed.	10：00 Sign of Minutes
13	May 25	Thu.	10：00 Courtesy call – Embassy of Japan in Ukraine
			14：00 Meeting and Survey – Ohmatdyt Hospital
14	May 26	Fri.	09：30 Meeting and Survey – Ohmatdyt Hospital
15	May 27	Sat.	14：10 Departure from Kiev (LH3261)
			16：00 Arrival at Frankfurt
			20：30 Departure from Frankfurt
16	May 28	Sun.	14：45 Arrival at Narita

３．List of Concerned Parties in the Recipient Country

Ministry of Health

Anatoly Kartish	Vice Minister
Анатолий КАРТЫШ	Зам. Министр
Yuri Polyachenko	Vice Minister
Юрий ПОЛИАЧЕНКО	Зам. Министр
Oleg Kezhne	Adviser to the Minister of Public Health
Олег КЕЖНЫЙ	Советник министра здровоохранения
Nina Goyda	Chief of Maternal Protection Division
Нина ГОИДА	Начальника Главного управления медицинской помощи детям и матерям
Raisa Moysehnko	Assistant Chief of Maternal Protection Division
Раиса МОИСЕЕНКО	Зам. начальника Главного управления медицинской помощи детям и матерям
Tatiana Verzhyn	Specialist, International Division
Татьяна ВЕРЗУН	Специалист международного отдела
Janna Tsenirova	International Division
Жанна ЦЕНИЛОВА	Отдел международных связей

Ukraine Ministry of Economics＊

Alexandre Brodsky	Vice Minister of International and European Office
Олександр БРОДСКИЙ	Зам. Министра Департамента Международных Дел и Интеграции Европы
Andrei Nikitov	Director-General
Андрей НИКИТОВ	Начальник управления
Alena Litvinyenko	Chief Specialist
Олена ЛИТВИНЕИКО	Главный специалист
Ludmila Dokchaeva	Chief Specialist
Людмила ДОКУТЯЕВА	Главный специалист

＊The former Office of Development / European Unification has been consolidated with the Ministry of Economics, and is now part of that Ministry.

UNDP

Osami Maeda	Program Officer
Осами МАЭДА	Офишер национальной программы
Alena Sichikar	Program Officer
Олена ШИЧКАР	Офишер национаольной программы

UNICEF

Viktor Karpenko	Project Officer
Виктор КАРПЕНКО	Координатор программ ЮНИСЕФ в Унраине
Mikhail Alexanian	Project Officer
Михайл АЛЕКСАНЯН	Supervisor, Russian, Ukraine, Belarus
	Советник Представителя ЮНИСЕФ по программам в
Ohmadyt Specialized	России, Украине и Беларуси
Children's Hospital, main hospital	
Natalia Karina	Director
Наталья КАРИНА	Генеральный директор
Tamara Marchenko	Assistant Director (Paediatrics)
Тамара МАРЧЕНКО	Зам. генерального директора
Svetlana Sai	Assistant Director (Gynaecology and Obstetrics)
Светлана САЙ	Зам. генерального директора
Vladimir Pavarazynyok	Assistant Director (and Surgical Director)
Владимир ПОВОРОЗНЮК	Зам. генерального директора
Piotr Voronovski	Facilities Supervisor, Assistant Director
Петр ВОРОНОВСКИЙ	Зам. ген. Директора по административной Хозяйственной
	части
Lyubomir Kuzhminski	Chief, Internal Medicine, Anesthesiology Division
Любомир КУЗЬМИНСКИЙ	Заведующий анастезиологей
Alexandre Grishen	Surgery, Chief of Emergency Surgery Division, Burn Division
Александр ГРИШЕН	Заведующий отдедениями ургентной хирургии и гной
	хирургии
Mikhail Syrichenko	Surgery, Chief of Thoracic and Abdominal Surgery Division
Михаил СИЛЬЧЕНКО	Заведующий тороко-абдоминальным отделением

Irina Maksakova	Surgery, Chief of Neonatal Surgery Division
Ирина МАКСАКОВА	Заведующая отделением хирургии для новорожденных
Anatoly Levinsky	Surgery, Chief of Orthopedic Surgery and External Wound Division
Анатолий ЛЕВИЦКИЙ	Заведующий отделением ортопедии и травматологии
Vladimir Kolchemsky	Surgery, Chief of Microsurgery Division
Вламидир КОРЧЕМСКИЙ	Заведующий микрохирургией
Sergei Nifontov	Surgery, Chief of ICU
Сергей НИФОНТОВ	Заведующий отделением интенсивной терапии
Boris Sheman	Surgery, Chief of Clinical Toxicology Center
Борис ШЕЙМАН	Заведующий научно-практическим центром клинической токсокологии
Irina Gavrilova	Surgery, Chief of Gynaecology
Ирина ГАВРИЛОВА	Заведующая геникологией
Natalia Pavlovskaya	Surgery, Chief of Otolaryngology
Наталья ПАВЛОВСКАЯ	Заведующая оторингологией
Vladimir Parhomenko	Surgery, Chief of Surgical Block
Владимир ПАРХОМЕНКО	Заведующий операционным блоком
Lubovy Shepery	Paediatrics, Chief of Allergies and Immunology Division
Любовь ШЕПЕЛЬ	Заведующая отледением аллергологии и иммуналогии
Larisa Nifontova	Paediatrics, Chief of Endocrinology Division
Лариса НИФОНТОВА	Заведующая отледением эндокринологии
Galina Mostovaya	Paediatrics, Chief of Neurology Division
Галина МОСТОВАЯ	Заведующая отделением неврологии
Raisa Mostavenko	Paediatrics, Chief of Infectious Diseases
Раиса МОСТОВЕНКО	Заведующая инфекционно-диагностическим отделением
Valentina Leush	Paediatrics, Chief of Infantile Infectious Diseases
Валентина ЛЕУШ	Заведущая инфектионным отделением младшего возраста
Tatiana Orlova	Neonatal Division, Chief of Neonatal and Premature Division 1
Татьяна ОРЛОВА	Заведующая отделением новорожденных и недоношенных 1
Svetlana Starenikaya	Neonatal Division, Chief of Neonatal and Premature Division 2
Светлана СТАРЕНЬКАЯ	Заведующая отделением новорожденных и недоношенных 2
Elena Karoly	Neonatal Division, Chief of ICU

Елена КОРОЛЬ	Заведующая отделением реанимации новорожденных
Oliga Stechuk	Hematapostema Center, Chief of Hematapostema Division
Ольга СТЕЦЮК	Заведующая отделениями дневного стационара и интенсивной онкогематологии
Natalia Kubalya	Hematapostema Center, Chief of Hematapostema Division
Наталья КУБАЛЯ	Заведующая отеделением онкогематологии
Evgeny Karamanesht	Hematapostema Center, Chief of Bone Marrow Transplant Division
Евгений КАРАМАНЕШТ	Заведуюший отеделением трансплантации костного мозга
Tatiana Takoeva	Chief of Physiological Functions Testing Department
Татьяна ТАКОЕВА	Заведующий отделением функциональной диагностики
Viktoria Yanovskaya	Chief of Central Testing Laboratory
Виктория ЯНОВСКАЯ	Заведующая центральной лабораторией
Svetlana Trush	Chief of Bacteriological Testing Laboratory
Светлана ТРУШ	Заведуюшая бактериологической лаботаторией
Vladimir Zhezhera	Chief of Pathological Anatomy
Владимир ЖЕЖЕРА	Заведующий отделением патоанатомии
Vera Galagan	Chief of Genetics Center
Вера ГАЛАГАН	Заведующая Генетическим центром
Tamara Voroniko	Chief of Physical Therapy Separtment
Тамара ВОРОНЬКО	Заведующая отделением физиотерапии
Nina Naumenko	Laundry Chief
Нина НАУМЕНКО	Заведующая отделением прачечной
Nina Timoshenko	Architectural Department, Architect
Нина ТИМОШЕНКО	Строительный отдел
Nikolai Zvolsky	Chief Engineer, Chief of Medical Equipment Repair Division
Николаи ЗВОРСКИЙ	Старший инженер, Руководитель группы инженеров

Ohmadyt Specialized Children's Hospital, Annex

Larisa Vondarenko	Assistant Chief, Annex
Лариса БОНДАРЕНКО	Зам. генерального директора поликлиники
Nadezhda Ivanova	Head Nurse, Annex
Надежда ИВАНОВА	Старшая медсестра полклиники

Ivan Serjuk	Annex, Chief of Physiological Functions Diagnosis and Testing
Иван СЕРДЮК	Заведующий функциональной диагностикой в поликлинике
Galina Vedeva	Annex, Chief of Gynaecology Department
Галина ВЕДЕВА	Заведуюзщая гинекологией в поликлинике
Vera Gavriyash	Annex, Laboratory Chief
Вера ГАВРИЯШ	Заведующая лаборатории поликлиники
Georgi Paryadkov	Chief of Endoscopy
Георгий ПОРЯДКОВ	Заведующий отделением эндоскопии поликлиники
Valerie Chemezov	Instructor, Radiology
Валерий ЧЕМЕЗОВ	Инженер-радиолог
Vitali Zenchaenko	Instructor, Radiology
Виталий ЗЕНЧЯЕНКО	Инженер-радиолог

Kiev City No. 2 Paediatric Hospital

Oliga Juba	Director
Ольга БЗЮБА	Директор
Larisa Konovalova	Head Nurse
Лариса КОНОВАЛОВА	Главная медсестра

4. Minutes of Discussion

MINIUTES OF DISCUSSIONS

ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT

[redacted]

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve and strengthen medical services at the Ukrainian children's specialized hospital "OKHMATDET" through the provision of medical equipment.

2. Project Site

The site of the Project is the Ukrainian children's specialized hospital "OKHMATDET" located in Kiev.

3. Responsible Ministry and Implementing Agency

3-1 The Responsible Ministry is the Ministry of Health of Ukraine.

3-2 The Implementing Agency is the Ukrainian children's specialized hospital "OKHMATDET".

4. Items requested by the Government of Ukraine

After discussions with the Team, the items shown in Annex I were finally requested by the Government of Ukraine.

However, the final components of the Project may differ from the above items, if it is judged necessary after the further studies.

5. Japan's Grant Aid Scheme

5-1 The Ukrainian side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex II.

5-2 The Ukrainian side will take the necessary measures, as described in Annex III, for smooth implementation of the Project, as the conditions for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1 The consultants will proceed to the further studies in Ukraine until March 10, 2000.

6-2 JICA will prepare the Draft Final Report in English and its executive summary in Russian, and dispatch the mission in order to explain its contents in May, 2000.

6-3 In case that the contents of the Report are accepted in principle by the Government of Ukraine, JICA will complete the Final Report and send it to the Government of Ukraine around August, 2000.

7. Other relevant issues

7-1 The Team repeatedly stressed that it needed the firm commitment by the Ministry of Health of Ukraine concerning securing and allocating the enough budget for the proper operation and maintenance of the requested items.

7-2 In response to the Team's comment, the Ministry of Health of Ukraine prepared the letter to the Team, herein ANNEX IV, concerning the budgeting.

7-3 The Team requested to the Ukrainian side to secure the completion of the renovation work for the installation of the equipment until its delivery, if necessary. In addition, its cost should be born by the Ukrainian side.

7-4 The Ukrainian side confirmed that the Ministry of Health of Ukraine will conduct periodical monitoring on the activities of the Project and evaluate its impact with respect to the medical services. The result of the monitoring and evaluation will be reported annually to Embassy of Japan in Kiev.

7-5 The Team pointed out to secure the fairness of competitive tender, the concrete information on the Project should be confidential to the private suppliers.

7-6 The Ukrainian side confirmed that the Ukrainian children's specialized hospital "OKHMADET" will remain unprivatized in the foreseeable future.

7-7 The Ukrainian side declared not to request the similar item list to other donors in order to avoid duplication of the equipment.

List of Requested Equipment

Annex I

Item No	Generic title	Qty Total	Hospital		Polyclinic	
			Qty	Priority	Qty	Priority
A. Laboratory						
A-01	Medical Refrigerator	1	1	A	-	-
A-02	Blood Refrigerator	1	1	A	-	-
A-03	Microscope	12	9	A	3	A
A-04	Incubator with Stand	7	5	A	2	A
A-05	Anaerobic Incubator	2	2	A	-	-
A-06	Steam Sterilizer Vertical	2	1	A	1	A
A-07	Water Bath	6	4	A	2	A
A-08	Mixer	2	2	B	-	-
A-09	Rotator Mixer	2	2	C	-	-
A-10	Bacteriological Analyzer	1	1	A	-	-
A-11	Hemacytometer Set	3	3	C	-	-
A-12	Hemoglobin Meter	1	1	A	-	-
A-13	PH Meter	3	2	A	1	A
A-14	Refract Meter	3	2	A	1	A
A-15	Blood Gas Analyzer	2	2	A	-	-
A-16	Coagulometer	2	2	A	-	-
A-17	Clinical Spectrophotometer	4	3	A	1	A
A-18	Centrifuge Table Top	4	3	A	1	A
A-19	Hematocrit Centrifuge	1	1	A	-	-
A-20	Electron Balance	2	1	A	1	A
A-21	Slide Staining Set	4	2	C	2	C
A-22	Slide Warmer	1	1	B	-	-
A-23	Slide Rack	5	4	C	1	C
A-24	Staining Jar	3	2	C	1	C
A-25	Biochemical Analyzer	1	1	A	-	-
A-26	Immuno Reader	1	1	A	-	-
A-27	Plate Washer	2	2	B	-	-
• A-28	Hematological Analyzer	2	1	A	1	A
• A-29	Freezing Chamber	1	1	A	-	-
• A-30	Immunology Boxes	1	1	A	-	-
• A-31	Laminal Box	2	2	A	-	-
• A-32	Poly-chain DNA Diagnostic Analyzer	1	1	A	-	-
B. Surgical operation theater						
B-01	Operation Table Universal	7	7	A	-	-
B-02	Anesthetic Apparatus with Vaporizer	6	6	A	-	-
B-03	Ventilator	3	3	A	-	-
B-04	Suction Unit	7	7	A	-	-
B-05	Electrical Surgical Unit	7	7	A	-	-
B-06	Pulse Oximeter	8	8	A	-	-
B-07	Ultrasonic Scanner Mobile	2	2	A	-	-
B-08	X-Ray Unit Mobile	3	3	A	-	-
B-09	X-Ray Unit T.V. Mobile	1	1	A	-	-
B-10	Operation Monitor	5	5	A	-	-
B-11	Resuscitator with Gas Cylinder	2	2	A	-	-
B-12	Endotracheal Set for Infant	3	3	B	-	-
B-13	Endotracheal Set for Adult	3	3	B	-	-
B-14	Operation Microscope General	1	1	A		-
B-15	Laparoscope Set	1	1	A	-	-
B-16	Gypsum Cutter	2	2	B	-	-
B-17	Oxygen Monitor	2	2	B	-	-
B-18	Defibrillator	4	4	A	-	-
B-19	Washing Machine for Surgical Instruments	1	1	B	-	-
B-20	Sterilizer for Instruments	5	4	A	1	A
B-21	Apparatus for General Sterilization of The Cloth	2	2	A	-	-

Item No.	Genelic title	Qty Total	Hospital		Polyclinic	
			Qty	Priority	Qty	Priority
B-22	Mosquito Hemostatic forceps	40	40	B	-	-
B-23	Kocher Hemostatic forceps	40	40	B	-	-
B-24	Kelly Hemostatic forceps	50	50	B	-	-
B-25	Scissors	50	40	B	10	B
B-26	Hegar Mayo Needle Holder	10	10	B	-	-
B-27	Needle Holder	20	20	B	-	-
B-28	Mathieu Needle Holder	10	10	B	-	-
B-29	Roser Needle Holder	5	5	B	-	-
B-30	Blood Vessel Needle Holder	5	5	A	-	-
B-31	Mayo Dissecting Scissors	30	30	A	-	-
B-32	Scissors, Mezlembaum	30	20	A	10	A
B-33	Dressing Forceps	30	30	A		-
B-34	Tissue Forceps	30	30	A	-	-
B-35	Allis Intestinal forceps	15	15	A	-	-
B-36	Schenberg Instinal forceps	5	5	B	-	-
B-37	Kocher Retractor	5	5	B	-	-
B-38	Langenbech Retractor	5	5	B		
B-39	Frisach Abdominal Retractor	5	5	B	-	-
B-40	Right-Angle	5	5	B	-	-
B-41	Abdominal Retractor	2	2	B		-
B-42	Operating Instrument Set	3	3	A		
B-43	Small Operating Instrument Set	5	3	B	2	B
B-44	Surgical Instrument Set	3	3	B		
B-45	Nephrectomy Instrument Set	2	2	B		-
B-46	Emergency Tracheotomy Instrument Set	1	1	A	-	-
B-47	Appendectomy Instrument Set	2	2	B	-	-
B-48	Venotomy Instrument Set	3	3	A		-
B-49	Retractor	5	5	B	-	-
B-50	Air Pressure Skull Operation Set	1	1	B		
B-51	Kirschner Wire Traction Instrument Set	2	2	A	-	-
B-52	Bone Fracture Set	2	2	A	-	-
B-53	Houzel's Abdominal Retractor	2	2	B		-
C. Functional diagnostic						
C-01	ECG, 6-Ch	3	1	A	2	A
C-02	EEG	2	1	A	1	A
C-03	Diagnostic X-Ray System	1	1	A		-
C-04	CT Scanner	1	1	A	-	-
C-05	Multi-format Camera	1	1	A	-	-
C-06	X-Ray Protection Set	1	1	A	-	-
C-07	X-Ray Film Processor Table Top	2	1	A	1	A
C-08	X-Ray Film Processor	1	1	A		-
C-09	X-Ray Film Development Manual Set	1	1	B	-	-
C-10	Film Marker	1	1	A		-
C-11	Air Conditioner	1	1	A	-	-
C-12	Upper Gastrofiberscope	8	4	A	4	A
C-13	Lower Gastrofiberscope	1	1	A	-	-
C-14	Fiberscope Table	2	1	C	1	C
C-15	Fiberscope Trolley	1	1	B		-
C-16	Fiberscope Suction Unit	2	1	A	1	A
C-17	Fiberscope Illuminator	3	2	A	1	A
C-18	Fiberscope Cleaning Machine	2	1	B	1	B
C-19	Fiberscope Cabinet	1	1	A	-	-
• C-20	Electromyograph with Computer Processing	1	1	A	-	-
• C-21	Endoscopic Instruments Set	1	1	A	-	-
• C-22	Hard Children Bronchoscope	2	2	A	-	-

Item No.	Genelic title	Qty Total	Hospital		Polyclinic	
			Qty	Priority	Qty	Priority
D. GY. OB Delivery						
D-01	Electronic Suction Pump	10	8	A	2	A
D-02	Infusion Pump	10	10	A	-	-
D-03	Instrument Set for Episiotomy	2	2	D	-	-
D-04	Delivery Monitor CTG	2	2	D	-	-
D-05	Vacuum Extractor	1	1	D	-	-
D-06	Forceps for Delivery	2	2	D	-	-
D-07	Incubator	8	8	A	-	-
D-08	Delivery Bed	2	2	D	-	-
D-09	Ultrasound with Vaginal Probe	1	-	-	1	A
D-10	Gynecology Examination Table	2	1	B	1	B
D-11	Obstetric Examination Table	1	1	D	-	-
D-12	Operating Table	1	1	A	-	-
D-13	Operating Light Ceiling Type	5	4	A	1	A
D-14	Abdominal Hysterectomy Instrument Set	1	1	D	-	-
D-15	Vaginal Hysterectomy Instrument Set	1	1	B	-	-
D-16	Cesarean Section Instrument Set	1	1	D	-	-
D-17	Microchirugye Set for Fertility	1	1	D	-	-
D-18	Bipolar Diathermy	1	1	A	-	-
E. Pediatric						
E-01	Pediatric Surgical Incubator	10	10	A	-	-
E-02	Children Aspirator	10	10	A	-	-
E-03	Ultrasound with Cardio Programme	1	1	A	-	-
E-04	Reanimation Set	3	3	B	-	-
E-05	Exsngyino Transfusion Set	10	10	A	-	-
E-06	ECG, 3-Ch	1	-		1	A
E-07	Small Autoclave electric	4	3	A	1	A
E-08	Infant Automatic Scale	10	10	B	-	-
E-09	Patient Monitor	4	4	A	-	-
E-10	Infusion Pump for Pediatric Use	12	12	A	-	-
E-11	Phototherapy Unit	6	6	A	-	-
F. ICU						
F-01	Central Patient Monitor System, 8 Beds	1	1	A	-	-
F-02	Ventilator	8	8	A	-	-
F-03	ECG Defibrillator with Pacemaker	1	1	A	-	-
F-04	Infusion Pump	10	10	A	-	-
F-05	Syringe Infusion Pump	10	10	A	-	-
F-06	Blood Gas Analyzer	1	1	A	-	-
F-07	Cardio Pulmonary Resuscitating Bag	5	5	C	-	-
F-08	Mobile Ventilator for Transparent of Critical Ill Patient	2	2	A	-	-
F-09	Expired Gas Monitor	3	3	B	-	-
• F-10	CPAP Apparatus	5	5	A	-	-
• F-11	Transport Incubator	2	2	A	-	-
• F-12	Ray - Heat Lamp	4	4	A	-	-
G. Physiotherapy						
G-01	Low Frequency Therapy Unit	3	3	A	-	-
G-02	Interferential Therapy Unit	2	2	A	-	-
G-03	Microwave Therapy Unit	2	2	A	-	-
G-04	Short-Wave Therapy Unit	2	2	A	-	-
G-05	Ultrasound Therapy Unit	2	2	A	-	-
G-06	Electric Shock Therapy Unit	2	2	D	-	-
G-07	Ultraviolet Lamp	2	2	A	-	-
G-08	Infrared Ray Thermal Unit	2	2	A	-	-
G-09	Infrared Ray Lamp	2	2	A	-	-

Item No.	Genelic title	Qty Total	Hospital Qty	Hospital Priority	Polyclinic Qty	Polyclinic Priority
H. Outpatient						
H-01	Diagnostic Set	5	-	-	5	A
H-02	Examination Table	10	-	-	10	A
H-03	Examination Light	10	-	-	10	A
H-04	Ultrasonic Neblizer	10	-	-	10	A
H-05	Suction Unit	6	-	-	6	A
H-06	EKG, 1-Ch	3	2	A	1	A
H-07	Sphygmomanometer	10	-	-	10	C
H-08	Stethoscope	10	-	-	10	C
H-09	IV Stand	10	8	A	2	A
H-10	Sterilizer	1	-	-	1	A
H-11	Boiling Sterilizer	5	-	-	5	C
H-12	Bilirubin Meter	1	-	-	1	A
H-13	Hematocrit Centrifuge	5	3	A	2	A
H-14	Colonoscope	2	-	-	2	A
H-15	Instrument Cart	5	3	A	2	A
I. Others						
I-01	Steam Sterilizer	5	4	A	1	A
I-02	Heat Sterilizer	2	2	A	-	-
I-03	Laundry Machine	4	4	A	-	-
I-04	Spinner	1	1	A	-	-
I-05	Incinerator	1	1	B	-	-
I-06	Ambulance One Box Type	2	2	A	-	-
● I-07	UPS for: operation theater	1	1	A	-	-
● I-08	UPS for: intensive care	2	2	A	-	-
J. Cytogenetics laboratory						
J-01	Microscope	3	3	A	-	-
J-02	System of Automatic Carriotyping	1	1	A	-	-
J-03	Video Camera of High Sensitivity for Microscope	1	1	B	-	-
J-04	Laminar-Box with Vertical Air Flow for Works	1	1	A	-	-
J-05	CO2 Incubator	1	1	A	-	-
J-06	Capilary Electrophoresis for Diagnosis of Heredity	1	1	A	-	-
J-07	Analytical Scales	1	1	A	-	-
J-08	Electrophoresis System for Separation	1	1	A	-	-
J-09	Amplification of Genes	1	1	C	-	-
J-10	Low Temperature Refrigerator -40°C for DNA	1	1	A	-	-
J-11	Sectional Cooler	1	1	A	-	-
J-12	Refrigerator for Blood Bank	1	1	A	-	-
J-13	Centrifuge for Test Tubes	1	1	A	-	-
J-14	Horizontal Electrophoresis Box	1	1	A	-	-
W. Hemodialysis						
● W-1	Artificial Kidney Apparatus	6	6	A	-	-
● W-2	Peritoneal Dialysis Apparatus	3	3	A	-	-
● W-3	Water Treatment System	1	1	A	-	-
● W-4	Plasmapheresis Apparatus	2	2	A	-	-
● W-5	Hemofiltration Apparatus	1	1	A	-	-

Note: ● : Newly requested

Priority: A: Highly needed
B: Needed
C: Needed if possible
D: Deleted

ANNEX Ⅱ

Japan's Grant Aid

1. Japan's Grant Aid Scheme

1) What is the Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, the period of the execution, the conditions and the amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant Aid"

"The period of the Grant Aid" means the one Japanese fiscal year (that starts in April and ends at the next March) that the Cabinet approves the Project for. Within one Japanese fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firms(s) and (a) contractor(s), and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one Japanese fiscal year at most by mutual agreement between the two Governments.

4) Purchase of the products or services

Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of the third country.

However, the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of "Verification"

The Government of recipient country of its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

6) Undertakings required of the Government of the recipient country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:

(1) To secure the completion of building rehabilitation work prior to the procurement of the equipment,

(2) To provide facilities with the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

(3) To secure buildings prior to the procurement in case the installation of the equipment,

(4) To ensure prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

(5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified contracts,

(6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work,

(7) To bear an advising commission of an Authorization of Pay (A/P) and payment commissions to the bank, with which the Government of the recipient country opens an account for the Project.

(8) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid,

(9) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country,

(10) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts,

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

2. Grant Aid Procedures

Japan's Grant Aid Program is executed through the following procedures.

1) Application:

The application for a Grant Aid Project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for the Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct the Study on the request.

2) Study:

JICA conducts the Basic Design Study, using (a) Japanese consulting firm (s).

3) Appraisal & Approval:

The Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Basic Design Study Report prepared by JICA, and the results are then submitted to the Cabinet for approval.

4) Determination of Implementation:

The Project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Government of Japan and the Government of the recipient country.

For the implementation of the Project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

3. Basic Design Study

1) Contents of the Study

The aim of the Study conducted by JICA on a requested Project is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

(1) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation,

(2) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view,

(3) Confirmation of items agreed on by both parties concerning the basic concept of the Project,

(4) Preparation of the Basic Design (B/D) of the Project,

(5) Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid Project. The Basic Design (B/D) of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out the Basic Design Study and write(s) the Report based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes (E/N), in order to maintain technical consistency and also to avoid any undue delay in implementation.

ANNEX Ⅲ

Major Undertakings to be taken by Each Government

No.	Items	To be covered by the Grant Aid	To be covered by the Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		●
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in the recipient country		●
	1) Marine(Air) transportation of the products from Japan or third countries to the recipient country	●	
	2) Tax exemption of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified		●
5	To maintain and use properly and effectively the equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for execution of the Project including operation and maintenance costs of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to Pay)

УПРАВЛІННЯ ЗОВНІШНІХ ЗНОСИН
МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

ANNEX IV

MINISTRY OF HEALTH OF UKRAINE
DEPARTMENT OF FOREIGN RELATIONS

16.04 Лют № 4.04.97

На № ________________

February 16, 2000

Mr. Satoshi Nakano
Leader
The Basic Design Study Team
Japan International Cooperation Agency

Dear Mr. Satoshi Nakano,

Following the discussions between the experts of the Ministry of Health of Ukraine (MOH) and experts of The Basic Design Study Team, Japan, during their mission to Kiev, this is to guarantee the obligations of the MOH related to the execution of works pertaining to the functioning of equipment delivered in the framework of the Japanese project ODA to the Ukrainian Children's Specialized Hospital "OKHMATDET" financed directly by this Ministry.

Prof. Anatoly Kartysh, M.D.,Ph.D.
Deputy Minister

Україна 252021, Київ • вулиця Грушевського, 7 —— 7 Hrushevsky Street, Kiev 252021, Ukraine
TEL. (044) 293-6165 / (044) 293-5271 • FAX (044) 293-6975 • TELEX 131360 TAMPO

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT IN THE UKRAINIAN CHILDREN'S SPECIALIZED HOSPITAL "OKHMATDET" IN UKRAINE
(EXPLANATION OF DRAFT REPORT)

In February, 2000 the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Improvement of Medical Equipment in the Ukrainian Children's Specialized Hospital "OKHMATDET" (hereinafter referred to as "the Project") to Ukraine. Through discussion, field survey, and technical examination of the results in Japan, JICA, prepared a draft report of the Study.

In order to explain and to consult the Ukrainian side on the components of the draft report, JICA sent to Ukraine the Draft Report Explanation Team (hereinafter referred to as "the Team"), headed by Toshiyuki Iwama, Deputy Director of the Second Project Management Division, Grant Aid Project Management Department, JICA from May 14 to May 27, 2000.

As a result of discussions, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Kiev, May 24, 2000

Toshiyuki Iwama
Leader
Draft Report Explanation Team
Japan International Cooperation Agency

Anatoliy Kartysh
Deputy Minister
Ministry of Health of Ukraine

Olexander Y. Brodskiy
Deputy Head
Directorate for International
Development and European
Integration
Ministry of Economy of Ukraine

ATTACHMENT

1. Components of the Draft Report

The Government of Ukraine agreed and accepted in principle the components of the draft report submitted and explained by the Team.

The revised equipment list is shown in Annex.

2. Japan's Grant Aid Scheme

The Ukrainian side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Ukraine as explained by the Team and described in Annex-II and Annex- III of the Minutes of Discussions signed by both parties on February 16, 2000.

There is some important timing for the successful implementation of the Project. They are:

(a) Consultant contract by December 2000;
(b) Contract with a successful bidder for the procurement of equipment by March 2001;
(c) Handing over of all equipment and all related services, including all payments, to be completed by beginning of March 2002.

Any and all internal procedure of the Government of Ukraine to ensure smooth implementation of the Project, such as tax exemption, issuance of A/P based on B/A (refer to 1. 6) (10) of Annex II of the Minutes of Discussion of February 16, 2000) as well as all incidental works to be done before installation of equipment, should thus be arranged in conformity of the detailed implementation schedule which will be agreed at the time of the preparation of the tender documents.

The Ukrainian side will bear all incremental costs - capital and recurrent - arising from this Project. The Draft Report contains a rough cost estimation for reference.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Ukraine by August 2000.

4. Other Relevant Issues

4.1 The Ukrainian side strongly requests replacement of obsolete pressing machines of the laundry section. If a cost-effective solution in terms of capital and recurrent cost could be found, the Team will present it to the Government of Japan for consideration.

4.2 The Team is convinced of the necessity of surgery devices for the laparoscope. It will explain it to the Government of Japan for consideration.

T.

Draft

Item No	Generic Title	Qty
A. Laboratory		
A-01	Refrigerator (Pharmaceutical)	1
A-02	Freezer	1
A-03	Microscope A	8
A-04	Microscope (Fluorecent)	1
A-05	Incubator (Laboratory)	3
A-06	Incubator Large size (Laboratory)	2
A-07	CO2 Incubator	2
A-08	Autoclave (Vertical)	1
A-09	Water Bath	4
A-10	PH Meter	2
A-11	Refract Meter	2
A-12	Electrolyte Analyzer	2
A-13	Coagulometer	2
A-14	Spectrophotometer	3
A-15	Centrifuge (Table top) A	3
A-16	Hematocrit Centrifuge	4
A-17	Analytical Scales	1
A-18	Biochemical Analyzer	1
A-19	Hematological Analyzer	2
B. Surgical operation theater		
B-01	Operating Table (Universal)	7
B-02	Anesthetic Apparatus	4
B-03	Suction Unit A	15
B-04	Electro Surgical Unit	8
B-05	Pulse Oximeter	7
B-06	X-Ray Unit (Mobile)	1
B-07	X-Ray Unit (C-arm)	1
B-08	Operating Monitor A	4
B-09	Operating Monitor B	1
B-10	Resuscitation Set (Hard case)	2
B-11	Operating Microscope	1
B-12	Defibrillator	3
B-13	Sterilizer (Hot air) A	6
B-14	Operating Instruments (Basic)	1
B-15	Operating Instrument Set (Orthopedic)	2
B-16	Operating Instrument Set (Microsurgery)	2
B-17	Operating Instrument Set (Emergency Tracheotomy)	1
B-18	Operating Instrument Set (Venotomy)	3
B-19	Kirschner Wire Traction Instrument Set	2
B-20	Electromyograph	1
B-21	Operating Light Ceiling Type	4
B-22	Instrument Cart	3
B-23	Infusion Pump	10
C. Functional diagnostic		
C-01	ECG, 6-Ch	1
C-02	EEG	1

Item No	Generic Title	Qty
C-03	Diagnostic X-Ray System	1
C-04	CT Scanner	1
C-05	X-Ray Protection Set	1
C-06	X-Ray Film Processor (Table top)	1
C-07	Film Marker	1
C-08	Gastrofiberscope A	2
C-09	Gastrofiberscope B	1
C-10	Colonofiberscope A	1
C-11	Fiberscope Suction Unit	1
C-12	Fiberscope Illuminator	2
C-13	Fiberscope Cleaning Machine	1
C-14	Fiberscope Cabinet	1
C-15	Endoscopic Instruments Set	1
C-16	Bronchoscope	2
C-17	Ultrasonic Scanner (Color doppler)	1
C-18	ECG, 1-Ch	2
C-19	Pulse Oximeter	1
D. Neonatology		
D-01	Incubator (Pediatric)	18
D-02	Suction Unit (Pediatric)	10
D-03	Infusion Pump	10
D-04	Sterilizer (Hot air) B	3
D-05	Neonatal Monitor	4
D-06	Srynge Pump	12
D-07	Phototherapy Unit	6
D-08	Ventilator A	5
D-09	X-Ray Unit (Mobile)	1
D-10	Ultrasonic Scanner (Portable)	1
D-11	CPAP Apparatus	5
D-12	Incubator (Transport) A	1
D-13	Incubator (Transport) B	1
D-14	Infantwarmer	4
E. ICU		
E-01	Central Monitor System (8 Beds)	1
E-02	Ventilator B	5
E-03	Defibrillator	1
E-04	Infusion Pump	10
E-05	Syringe Pump	10
E-06	Ventilator (Portable)	2
E-07	X-Ray Unit (Mobile)	1
E-08	Ultrasonic Scanner (Portable)	1
F. Physiotherapy		
F-01	Low Frequency Therapy Unit	3
F-02	Interferential Therapy Unit	2
F-03	Microwave Therapy Unit	2
F-04	Short-Wave Therapy Unit	2
F-05	Ultrasonic Therapy Unit	2

Item No.	Generic Title	Q'ty
F-06	Ultraviolet Lamp	2
F-07	Infrared Ray Thermal Unit	2
F-08	Infrared Ray Lamp	2
G. Outpatient		
G-01	Diagnostic Set	5
G-02	Examination Table A	7
G-03	Examination Table B	3
G-04	Examination Light	10
G-05	Ultrasonic Neblizer	10
G-06	Suction Unit C	6
G-07	Sterilizer (Hot Air) A	2
G-08	Sterilizer (Hot Air) B	2
G-09	Bilirubin Meter	1
G-10	Instrument Cart	2
G-11	Microscope A	3
G-12	Incubator (Laboratory)	2
G-13	Autoclave (Vertical)	1
G-14	Water Bath	1
G-15	Water Bath (Coagulation test)	1
G-16	PH Meter	1
G-17	Refract Meter	1
G-18	Spectrophotometer	1
G-19	Centrifuge (Table top) A	2
G-20	Hematocrit Centrifuge	1
G-21	Analytical Scales	1
G-22	Hematological Analyzer	1
G-23	Operating Instrument (Basic)	1
G-24	ECG, 6-Ch	3
G-25	EEG	1
G-26	X-Ray Film Processor (Table top)	1
G-27	Gastrofiberscope C	2
G-28	Gastrofiberscope D	1
G-29	Colonofiberscope B	2
G-30	Fiberscope Suction Unit	1
G-31	Fiberscope Illuminator	1
G-32	Fiberscope Cleaning Machine	1
G-33	ECG, 1-Ch	1
G-34	Suction Unit A	2
G-35	Ultrasonic Scanner	1
G-36	Operating Light (Mobile)	1
J. Others		
J-01	Sterilizer (Hot air) A	4
J-02	Autoclave	1
J-03	Laundry Machine	4
J-04	Drying Machine	2
J-05	Press Machine	2

Item No.	Generic Title	Qty
H. Cytogenetics laboratory		
H-01	Microscope B	2
H-02	Microscope (Fluorecent)	1
H-03	Cariotyping System	1
H-04	CO2 Incubator	1
H-05	Analytical Scales	1
H-06	Electrophoresis Box	1
H-07	Thermal Cycler	1
H-08	Refrigerator (low temperature)	1
H-09	Refrigerator (Pharmaceutical)	2
H-10	Centrifuge (Table top) B	1
I. Hemodialysis		
I-01	Hemodialysis Apparatus A	2
I-02	Hemodialysis Apparatus B	2
I-03	Peritoneal Dialysis Apparatus	2
I-04	Water Treatment System	1
I-05	Plasmapheresis Apparatus	1
I-06	Hemosorbtion Apparatus	1
I-07	Ventilator A	1
I-08	Defibrillator	1

ПРОТОКОЛ ПЕРЕГОВОРІВ
З ВИВЧЕННЯ ОСНОВНОЇ СХЕМИ
ПРОЕКТУ ПОСТАВКИ МЕДИЧНОГО ОБЛАДНАННЯ
УКРАЇНСЬКІЙ ДИТЯЧІЙ СПЕЦІАЛІЗОВАНІЙ ЛІКАРНІ
"ОХМАТДИТ", УКРАЇНА

(пояснення до проекту звіту)

В лютому 2000 року Японське агентство міжнародного співробітництва (надалі "JICA") відрядило до Української дитячої спеціалізованої лікарні "ОХМАТДИТ" (надалі "Проект") групу фахівців з вивчення основної схеми проекту поставки медичного обладнання. Під час обговорення, візитів до лікарні та результатів технічного обстеження в Японії, JICA підготувало проект звіту.

Щоби надати компетентні коментарі українській стороні щодо компонентів проекту звіту, JICA відрядило з цією метою до України групу фахівців (надалі "Група"), яку очолив пан Тошіукі Івама, Заступника директора відділу управління другим проектом, Департаменту керівництвом проектів гуманітарної допомоги, JICA в період з 14 по 27 травня 2000 року.

За результатами переговорів обидві сторони підтвердили основні положення, що зазначені в додатку. Група продовжить подальші роботи та підготує проект звіту за результатами візиту в Україну.

Київ, 24 травня, 2000 р.

Тошіукі Івама Керівник Групи, Японське агентство міжнародного співробітництва	Анатолій Картиш Заступник Міністра охорони здоров'я України	Олександр Бродський Заступник начальника Департаменту розвитку та європейської інтеграції

ДОДАТОК

1. Частини проекту звіту

Уряд України погоджує та визнає основні компоненти проекту звіту, надані та прокоментовані Групою.

Оновлений список обладнання міститься в окремому додатку.

2. Структура проекту японської гуманітарної допомоги

Українська сторона визнає структуру проекту та ті заходи, що необхідно вжити Уряду України відповідно до зауважень Групи, які містяться в Додатку II та Додатку III до Протоколу переговорів від 16 лютого 2000 року.

Успішна реалізація проекту вимагає дотримання наступного розкладу:

а) укладання контракту на консалтингові послуги до грудня 2000 року;

б) укладання контракту з переможцем тендеру на постачання обладнання до березня 2001 року;

в) передача та підключення обладнання, в т.ч. всі види оплат здійснюються до початку березня 2002 року.

Будь-які внутрішні процедури з боку Уряду України, які забезпечать безперешкодну реалізацію проекту, а саме звільнення від податків, дозвіл на оплату згідно з банківським узгодженням (див. 1.6) (10) Додатку II до Протоколу переговорів від 16 лютого 2000 року), будь-які непередбачені ремонтні роботи, пов`язані з установкою обладнання, таким чином, належить здійснити за етапною схемою реалізації проекту, яка погоджуватиметься під час підготовки тендерної документації.

Українська сторона несе всі витрати (основні та поточні), що пов`язані з проектом. Проект звіту містить приблизну оцінку вартості.

3. Термін підготовки заключного звіту

JICA підготує заключний звіт відповідно по питаннях, що погоджені, та надішле його Уряду України в серпні 2000 року.

4. Інше

4.1. Українська сторона суворо наполягає на заміні застарілих прасувальних машин для пральні. В разі, якщо питання, пов`язані з формуванням вартості та обслуговування цього обладнання в мехаж коштів, передбачених проектом, будуть вирішені, Група винесе згадану пропозицію на розгляд Уряду Японії.

4.2. Група розуміє необхідність в хірургічних насадках для лапараскопу. Уряду Японії будуть надані пояснення з цього приводу для прийняття рішення.

Item No.	Название	Generic Title	Q'ty
A.	Лаборатория	Laboratory	
A-01	Холодильник (фармацевтический)	Refrigerator (Pharmaceutical)	1
A-02	Морозильная камера	Freezer	1
A-03	Микроскоп А	Microscope A	8
A-04	Микроскоп (флюоресцентный)	Microscope (Fluorecent)	1
A-05	Инкубатор	Incubator (Laboratory)	3
A-06	Инкубатор большого размера	Incubator Large size (Laboratory)	2
A-07	Инкубатор (CO2)	CO2 Incubator	2
A-08	Автоклав (вертикальный)	Autoclave (Vertical)	1
A-09	Водяная баня	Water Bath	4
A-10	PH-метр	PH Meter	2
A-11	Рефрактометр	Refract Meter	2
A-12	Электролитный анализатор	Electrolyte Analyzer	2
A-13	Коагулометр	Coagulometer	2
A-14	Спектрофотометр	Spectrophotometer	3
A-15	Центрифуга (настольная)	Centrifuge (Table top)	3
A-16	Центрифуга (гематокритная)	Centrifuge (Hematocrit)	4
A-17	Аналитические весы	Analytical Scales	1
A-18	Биохимический анализатор	Biochemical Analyzer	1
A-19	Гематологический анализатор	Hematological Analyzer	2
B.	Хирургическая операционная	B. Surgical operation theater	
B-01	Операционный стол (универсальный)	Operating Table (Universal)	7
B-02	Анастезиологический аппарат	Anesthetic Apparatus	4
B-03	Отсасыватель А	Suction Unit A	15
B-04	Диатермия	Electro Surgical Unit	8
B-05	Пульсоксиметр	Pulse Oximeter	7
B-06	Рентгенодиагностическая установка (передвижная)	X-Ray Unit (Mobile)	1
B-07	Рентгенодиагностическая установка (в форме буквы С)	X-Ray Unit (C-arm)	1
B-08	Операционный монитор А	Operating Monitor A	4
	Операционный монитор В	Operating Monitor B	1
B-09	Реанимационный аппарат (в жестком кейсе)	Resuscitation Set (Hard case)	2
B-10	Операционный микроскоп	Operating Microscope	1
B-11	Дефибриллятор	Defibrillator	3
B-12	Сухожаровой шкаф А	Sterilizer (Hot air) A	6
B-13	Набор операционных инструментов (основной)	Operating Instruments (Basic)	1
B-14	Набор операционных инструментов (ортопедический)	Operating Instrument Set (Orthopedic)	2
B-15	Набор операционных инструментов (микрохирургический)	Operating Instrument Set (Microsurgery)	2
B-16	Набор операционных инструментов (реанимационный	Operating Instrument Set (Emergency Tracheotomy	1
B-17	Набор операционных инструментов (венотомический)	Operating Instrument Set (Venotomy)	3
B-18	Набор инструментов для скелетного вытяжения (KIRSCHN	Kirschner Wire Traction Instrument Set	2
B-19	Электромиограф	Electromyograph	1
B-20	Операционная лампа (стационарная)	Operating Light Ceiling Type	4
B-21	Тележка для инструментов	Instrument Cart	3
B-22	Инфузомат	Infusion Pump	10
C.	Функциональная диагностика	C. Functional diagnostic	
C-01	Электрокардиограф, шестиканальный	ECG, 6-Ch	1
C-02	Электроэнцефалограф	EEG	1
C-03	Диагностическая рентгенная установка	Diagnostic X-Ray System	1
C-04	Компьютерный томограф	CT Scanner	1
C-05	Защитная одежда для проведения рентгенограммы	X-Ray Protection Set	1
C-06	Аппарат для проявления рентгенограммы (настольный)	X-Ray Film Processor (Table top)	1
C-07	Маркер для пленки	Film Marker	1
C-08	Гастроскоп А	Gastrofiberscope A	2
C-09	Гастроскоп Б	Gastrofiberscope B	1
C-10	Колоноскоп А	Colonofiberscope A	1
C-11	Эндоскопический отсос	Fiberscope Suction Unit	1
C-12	Эндоскопическая лампа	Fiberscope Illuminator	2
C-13	Установка для промывания эндоскопа	Fiberscope Cleaning Machine	1
C-14	Шкаф для хранения эндоскопа	Fiberscope Cabinet	1
C-15	Набор инструментов для эндоскопа	Endoscopic Instruments Set	1
C-16	Бронхоскоп	Bronchoscope	2

Item No	Название	Generic Title	Qty
C-17	Ультразвуковой сканер (с цветным доплером)	Ultrasonic Scanner (Color doppler)	1
C-18	Электрокардиограф, одноканальный	ECG, 1-Ch	2
C-19	Пульсоксиметр	Pulse Oximeter	1
D.	Педиатрия	Neonatalogy	
D-01	Инкубатор педиатрический	Incubator (Pediatric)	18
D-02	Отсосыватель (педиатрический)	Suction Unit (Pediatric)	10
D-03	Инфузомат	Infusion Pump	10
D-04	Сухожаровой шкаф Б	Sterilizer (Hot air) B	3
D-05	Монитор (неонатальный)	Neonatal Monitor	4
D-06	Линеомат	Syringe Pump	12
D-07	Установка фототерапии	Phototherapy Unit	6
D-08	Аппарат искусственной вентиляции легких А	Ventilator A	5
D-09	Рентгеновский аппарат (передвижной)	X-Ray Unit (Mobile)	1
D-10	Ультразвуковой сканер (портативный)	Ultrasonic Scanner (Portable)	1
D-11	Аппарат CPAP	CPAP Apparatus	5
D-12	Инкубатор неонатальный транспортный А	Incubator (Transport) A	1
D-13	Инкубатор неонатальный транспортный В	Incubator (Transport) B	1
D-14	Реанимационный стол для новорожденных	Infantwarmer	4
E.	Реанимационное отделение	E. ICU	
E-01	Централизированная система контроля за пациентами (дл	Central Monitor System (8 Beds)	1
E-02	Аппарат искусственной вентиляции легких Б	Ventilator B	5
E-03	Дефибриллятор	Defibrillator	1
E-04	Инфузомат	Infusion Pump	10
E-05	Линеомат	Syringe Pump	10
E-06	Аппарат искусственной вентиляции легких (пор	Ventilator (Portable)	2
E-07	Рентгеновский аппарат (передвижной)	X-Ray Unit (Mobile)	1
E-08	Ультразвуковой сканер (портативный)	Ultrasonic Scanner (Portable)	1
F.	Физиотерапия	Physiotherapy	
F-01	Аппарат для НВЧ-терапии	Low Frequency Therapy Unit	3
F-02	Аппарат для интерференционной терапии	Interferential Therapy Unit	2
F-03	Аппарат для микроволновой терапии	Microwave Therapy Unit	2
F-04	Аппарат для КВЧ-терапии	Short-Wave Therapy Unit	2
F-05	Аппарат для ультразвуковой терапии	Ultrasonic Therapy Unit	2
F-06	Ультрафиолетовая лампа	Ultraviolet Lamp	2
F-07	Инфракрасный термический аппарат	Infrared Ray Thermal Unit	2
F-08	Инфракрасная лампа	Infrared Ray Lamp	2
G.	Поликлиника	Outpatient	
G-01	Набор диагностических инструментов	Diagnostic Set	5
G-02	Кушетка А	Examination Table A	7
G-03	Кушетка В	Examination Table B	3
G-04	Смотровая лампа	Examination Light	10
G-05	Ультразвуковой ингалятор	Ultrasonic Neblizer	10
G-06	Отсосыватель	Suction Unit C	6
G-07	Стерилизатор (сухожаровой) А	Sterilizer (Hot Air) A	2
G-08	Стерилизатор (сухожаровой) В	Sterilizer (Hot Air) B	2
G-09	Билирубинометр	Bilirubin Meter	1
G-10	Стелаж для инструментов	Instrument Cart	2
G-11	Микроскоп А	Microscope A	3
G-12	Инкубатор (лабораторна)	Incubator (Laboratory)	2
G-13	Автоклав (вертикальный)	Autoclave (Vertical)	1
G-14	Водяная баня	Water Bath	1
G-15	Коагуляционная водяная баня	Water Bath (Coagulation test)	1
G-16	PH-метр	PH Meter	1
G-17	Рефрактометр	Refract Meter	1
G-18	Спектрофотометр	Spectrophotometer	1
G-19	Центрифуга (настольная) А	Centrifuge (Table top) A	2
G-20	Центрифуга (гематокритная)	Centrifuge (Hematocrit)	1
G-21	Аналитические весы	Analytical Scales	1
G-22	Гематологический анализатор	Hematological Analyzer	1
G-23	Набор операционных инструментов (основные)	Operating Instrument (Basic)	1
G-24	Электрокардиограф, шестиканальный	ECG, 6-Ch	3

Item No.	Название	Generic Title	Q'ty
G-25	Электроэнцефалограф	EEG	1
G-26	Аппарат для проявления рентенограммы (настольный)	X-Ray Film Processor (Table top)	1
G-27	Гастроскоп С	Gastrofiberscope C	2
G-28	Гастроскоп D	Gastrofiberscope D	1
G-29	Колоноскоп В	Colonofiberscope B	2
G-30	Эндоскопический отсос	Fiberscope Suction Unit	1
G-31	Эндоскопическая лампа	Fiberscope Illuminator	1
G-32	Установка для промывания эндоскопа	Fiberscope Cleaning Machine	1
G-33	Электрокардиограф, одноканальный	ECG, 1-Ch	1
G-34	Электроотсос	Electronic Suction Pump	2
G-35	Ультразвуковой сканер	Ultrasonic Scanner	1
G-36	Операционная лампа (передвижная)	Operating Light (Mobile)	1
J.	Другие	Others	
J-01	Сухожаровой шкаф А	Sterilizer (Hot air) A	4
J-02	Автоклав	Autoclave	1
J-03	Стиральная машина	Laundry Machine	4
J-04	Центрифуга (для сушки белья)	Drying Machine	2
J-05	Гладильный каток	Press Machine	2
H.	Цитогенетическая лаборатория	Cytogenetics laboratory	
H-01	Микроскоп В	Microscope B	2
H-02	Микроскоп (флюоресцентный)	Microscope (Fluorecent)	1
H-03	Система кариотипирования	Cariotyping System	1
H-04	Инкубатор CO2	CO2 Incubator	1
H-05	Аналитические весы	Analytical Scales	1
H-06	Аппарат электрофореза (вертикальный)	Electrophoresis Box	1
H-07	Амплификатор	Thermal Cycler	1
H-08	Холодильник (низкотемпературный)	Refrigerator (low temperature)	1
H-09	Холодильник (фармацевтический)	Refrigerator (Pharmaceutical)	2
H-10	Центрифуга (настольная)	Centrifuge (Table top)	1
I.	Гемодиализ	Hemodialysis	
I-01	Аппарат гемодиализа А	Hemodialysis Apparatus A	2
I-02	Аппарат гемодиализа В	Hemodialysis Apparatus B	2
I-03	Аппарат перитонального диализа	Peritoneal Dialysis Apparatus	2
I-04	Водоочистная установка	Water Treatment System	1
I-05	Аппарат плазмафереза	Plasmapheresis Apparatus	1
I-06	Аппарат для гемосорбции	Hemosorbtion Apparatus	1
I-07	Аппарат искусственной вентиляции легких	Ventilator	1
I-08	Дефибриллятор	Defibrillator	1

6. Reference Documents

6. Reference Documents

Title	Source	Year
1. Questionarie and Answer	Ministry of Health of Ukraine Ukrainian Children's Hospital Okhmatdet	2000
2. On the Status of Children in Ukraine	Head of State Committee of Ukraine on Family and Youth issues	1999
3. Adolescent Reproductive and Sexual Health in Ukraine	Ministry of Health, UNPF, WHO	1999
4. Ukraine Human Development Report	UNDP	1998
5. Programme of Collaboration between the Government of Ukraine and UNICEF	UNICEF	1998/99
6. Basic Theses of Legislation of Ukrain about Health Protection	Government of Ukraine	1992