資料5. 討議議事録（M/D）

(Ⅰ)基本設計調査Ⅰ時

ATTACHMENT

1.Objective of the Project

The Objective of the Project is to produce measles vaccine locally in accordance with implementation of national measles control program through construction of the measles vaccine production facility.

2.Project site

The site of the Project is Thanh Tri Commune, Thanh Tri District, Hanoi City as shown in ANNEX - 1.

3.Responsible and Implementing Agency

3-1.The Responsible Agency is the Ministry of Health (MOH).

3-2.The Implementing Agency is the Poliomyelitis Vaccine Research and Production Center (POLIOVAC).

4.Construction of the facilities of the Project.

4-1. After discussions with the Team, the Vietnamese side requested to the Japanese side the construction of the following facilities and the supply of relevant equipment.

- Production facilities
  - -Bulk production zone, Final production zone
  - -Pharmaceutical water plant
- Quality control facilities
- Animal testing laboratory facilities
- Building services facilities (Electrical and Mechanical systems)
- Waste water treatment plant
- Incinerator

4-2. The Vietnamese side committed to complete the following.

- Allotment of 8,500 m^2 of land in Thanh Tri District for the Project.
- Supply of more than 2 billion VND for leveling the new site and construction of fence and gate in the year 2001 and 2002.
- Construction of the following work
  - -Administration building
  - -Parking garage

-In-site road
-Canteen
-Security guard house
-Landscaping of the site

5.Japan's Grant Aid Scheme

5-1. The Vietnamese side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-2.

5-2. The Vietnamese side will take the necessary measures, as described in Annex-3, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6.Schedule of the Study

6-1. The consultants will proceed with further studies in Viet Nam until April 5, 2002.

6-2. JICA will dispatch a mission to Viet Nam in order to discuss the issues of GMP and National Regulatory Authority in detail around June 2002.

6-3. JICA will prepare the draft report in English and dispatch a mission to Viet Nam in order to explain its contents around September 2002.

6-4. In case the contents of the report are accepted in principle by the Government of Viet Nam, JICA will complete the final report and send it to the Government of Viet Nam by February 2003.

7.Other relevant issues

7-1. Both sides reconfirmed all the contents of the Minutes of Discussions of the Preparatory Study signed on 21 June, 2001.

7-2. The Vietnamese side expressed that the manufacturing process of measles vaccine shall be met with the WHO-GMP standard.

7-3. The Japanese side was informed that the Ministry of Health of Viet Nam decides to appoint the National Center for Quality Control of Medical Biologicals (CENCOBI) as the sole institution responsible for carrying out the functions of a National Regulatory Authority (NRA) for vaccines and biological products in Viet Nam. Both sides understood that strengthening of the NRA with technical assistance from the World Health Organization (WHO) is necessary for measles vaccine production to meet WHO-GMP standards. The Vietnamese sides expressed that the NRA shall receive WHO assessment and achieve the qualification of the six critical functions by the end of the year 2005.

7-4.The Vietnamese side requested the following technology transfer, including training in Japan, Viet Nam and other countries as needed. Both sides understood that technical input from Viet Nam, Japan and WHO will be necessary for the following;

-Measles vaccine production

-Measles vaccine quality control

-GMP

-Validation

-Maintenance of the facilities and equipment

The Vietnamese side also expressed that they wish technical cooperation from Kitasato Institute to develop local measles vaccine production including the;

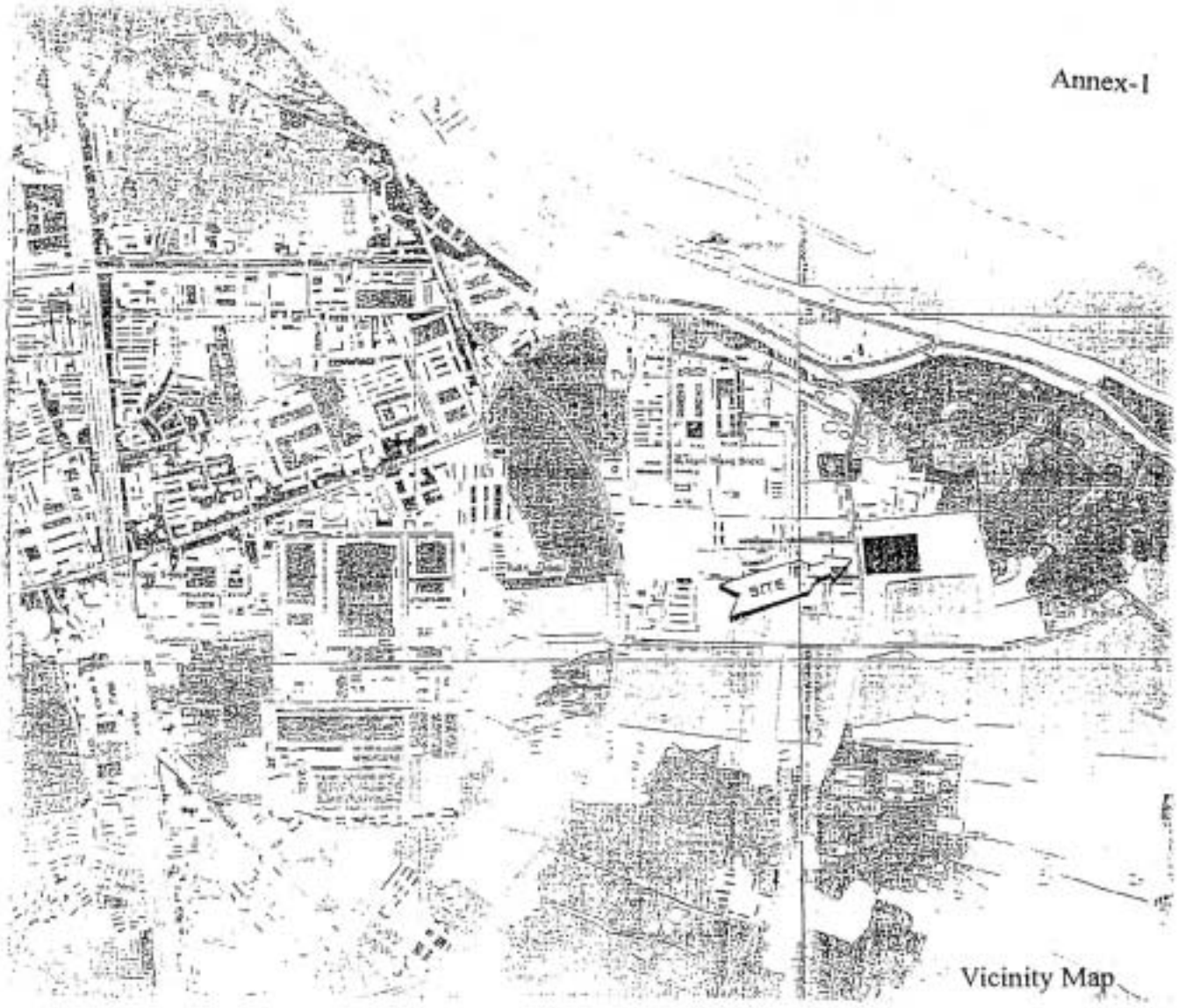
-Supply of bulk vaccine for the first 2 years after completion of the facilities

-Supply of master and working seed viruses (AIK-C).

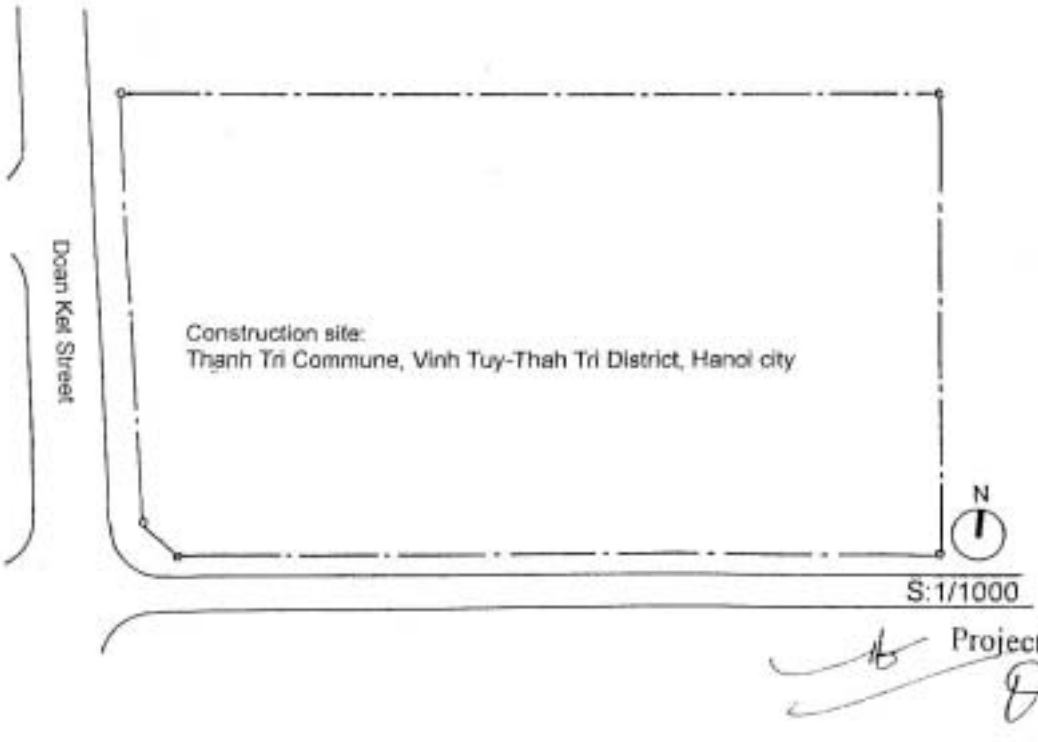
7-5.The Vietnamese side confirmed that the Ministry of Health of Viet Nam will be responsible for the operational costs and the allocation of the necessary personnel once the facilities enter into production.

7-6.The Vietnamese side will secure the official appraisal and approval required for the implementation of the Project by the Government of Viet Nam by October 2002.

Annex-I



Vicinity Map



Project Site

Japan's Grant Aid Program

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.
Application (request made by a recipient country)
Study (Basic Design Study conducted by JICA)
Appraisal & Approval (appraisal by the Government of Japan and approval by the Cabinet of Japan)
Determination of Implementation (Exchange of Notes between both Governments)
Implementation (implementation of the Project)

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request.

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

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

Fourth, the project approved by the cabinet becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

2. Contents of the Study

(1) Contents of the Study

The purpose of the Basic Design Study conducted by JICA on a requested project is to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

a) confirmation of the background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,

b) evaluation of the appropriateness of the project for the Grant Aid Scheme from a technical, social and economical point of view,

c) confirmation of items agreed on by the both parties concerning a basic concept of the project,
d) preparation of a basic design of the project,
e) estimation of cost 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 of the project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request. Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

(2) Selection of Consultants

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

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

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

(2) Exchange of Notes (E/N)

Both Governments concerned extend Japan's Grant Aid in accordance with the Exchange of Notes in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid etc., are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year that the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.

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

However the prime contractors, namely, consulting, contractor 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 the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. The Government of Japan shall verify those contracts. The "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertakings Required to 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:

a) to secure land necessary for the sites of the project prior to the installation work in case the project is providing equipment,

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

c) to secure buildings prior to the installation work in case the project is providing equipment,

d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

e) 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,

f) 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) Proper Use

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

(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in a bank in Japan. The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by 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 issued by the Government of the recipient country or its designated authority.

Annex-3

Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To construct the parking lot		●
5	To construct roads		
	1) Within the site		●
	2) Outside the site		●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		●
	b.The drop wiring and internal wiring within the site	●	
	c.The main circuit breaker and transformer	●	
	2)Water Supply		
	a.The city water distribution main to the site		●
	b.The supply system within the site (receiving and/or elevated tanks)	●	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		●
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	●	
	4)Gas Supply		
	a.The city gas main to the site		●
	b.The gas supply system within the site	●	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame / panel (MDF) of the building		●
	b.The MDF and the extension after the frame / panel	●	
	6)Furniture and Equipment		
	a.General furniture		●
	b.Project equipment	●	
8	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		●
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	

10	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		●
11	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 contract		●
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●

（2）基本設計調査Ⅱ時

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY (II)
ON THE PROJECT FOR CONSTRUCTION OF THE MEASLES VACCINE PRODUCTION FACILITY
IN THE SOCIALIST REPUBLIC OF VIET NAM

In response to a request from the Government of the Socialist Republic of Viet Nam(hereinafter referred to as "the Viet Nam"), the Government of Japan decided to conduct a Basic Design Study on the Project for Construction of the Measles Vaccine Production Facility (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA") .

JICA sent to Viet Nam the Basic Design Study Team (II)(hereinafter referred to as "the Team"), which is headed by Mr. Hisashi Noguchi , Assistant Director, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, and is scheduled to stay in the country from 22 to 30 May, 2002.

The Team held discussions with the officials concerned of the Government of Viet Nam and conducted a field survey at the study area.

As a result of discussions and field survey, both parties confirmed the main items described on the attached sheets.

Hanoi, 30 May, 2002

Hisashi Noguchi

Mr. Hisashi Noguchi
Leader
Basic Design Study Team (II)
Japan International Cooperation Agency

Prof. Nguyen Van Thuong
Vice Minister for Health
The Socialist Republic of Viet Nam

Witnessed by

Mrs. Pascale Brudon
WHO Representative in Viet Nam

ATTACHMENT

1. Reconfirmation of the previous Minutes of Discussions

The Vietnamese side and the Japanese side reconfirmed validity of all the contents in the two previous Minutes of Discussions concluded at the first Basic Design Study on 1 April, 2002 and at the Preliminary Study on 21 June, 2001.

2. National Regulatory Authority (NRA)

The Vietnamese Government requested WHO to grant the support for strengthening the NRA. WHO had their experts' review of the Plan of Action established by CENCOBI as the NRA of Viet Nam and prepared the recommendations for the institutional development and training plan. The Vietnamese side expressed the understanding of importance to strengthen the NRA and to establish the legal basis for enforcement of an internationally acceptable standard of GMP. They also promised that the NRA should receive WHO assessment and achieve the full qualification of the six critical functions by the end of the year 2005.

3. Agreement for Technology Transfer between the POLIOVAC and the Kitasato Institute

The Vietnamese side and Japanese side confirmed that the resource for seed virus and bulk vaccine is not included in the scope of the Grant Aid Scheme. Therefore, the Vietnamese side committed that the contractual basis should be established through negotiations between the POLIOVAC and the Kitasato Institute and that the both parties need to conclude the legal Agreement for technical transfer for this Project at the earliest stage possible.

This Agreement should include but not limited to the following items;

(1) The conditions for supplying the seed virus (AIK-C) and the bulk vaccine necessary for the first two years after the substantial completion of the Facilities.

(2) The conditions for the technology transfer regarding measles vaccine production and quality control technology.

4. Contents of the Facilities

The Vietnamese side and Japanese side agreed about the contents of the Facilities, which are indicated in the ANNEX 1.

The following items are included in the scope of responsibility on the Vietnamese side.

- Allotment of 8,500 sqm of land in Thanh Tri District for the Project.
- Leveling of the site to the proposed level indicated in the detailed design document.
- Construction of the following work
  - -Administration building
  - -Parking Garage
  - -In-site road

-Canteen
-Security guard house
-Landscaping of the site

5.Procurement of production equipment

The Vietnamese side requested the production equipment necessary for the Project which is indicated in ANNEX 2 with items categorized into five groups according to its priority. Further study will be made to conclude the selection of equipment.

6.Technology upgrading scheme proposed by the Vietnamese side

The Vietnamese side established their technology-upgrading scheme as shown in the ANNEX 3 and proposed it to the study team. The objective of this scheme is to achieve the self-reliant capabilities for production of measles vaccine in the years to come. The Vietnamese side stated in this scheme that the source of technology transfer regarding measles vaccine production should be from the Kitasato Institute, Quality Control Technology from the Kitasato Institute or other relevant institutions and the advisory institute for the GMP will be selected with the recommendation from WHO.

The Vietnamese Government, Japanese Government and WHO will respectively share the responsibility for the technical input to such technology transfer. The training will take place either in Japan, Vietnam or other countries.

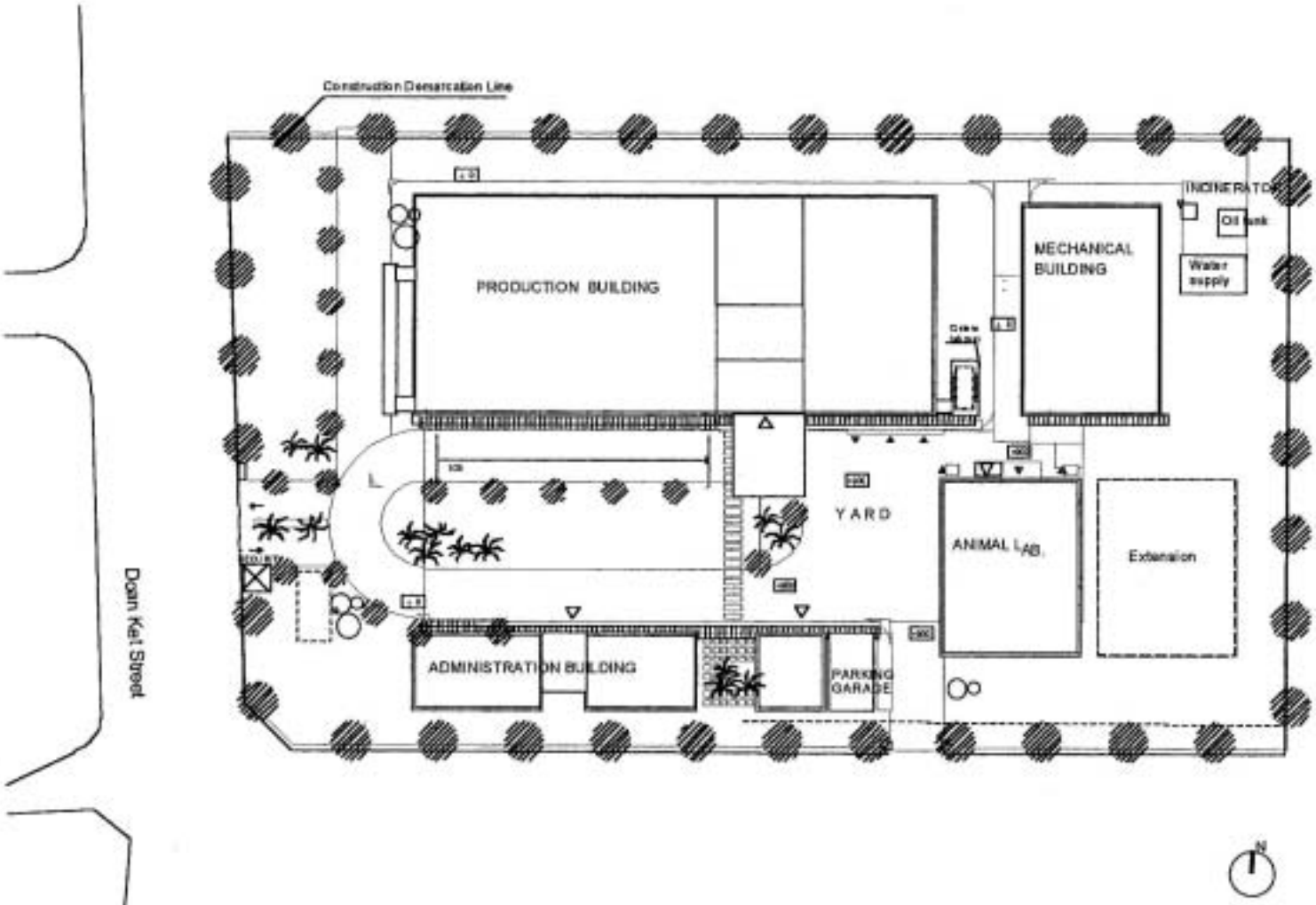
7.Soft Component of the Grant Aid Project

The Vietnamese side requested the Japanese side to include the consulting services for a part of validation and facility maintenance in the Project as a "Soft Component" of the Project.

The Japanese side explained that it is included in the Project although the extent of such "Soft Component" is limited to these areas.

8.Other relevant issue

The Vietnamese side will complete the official appraisal for the Project and obtain the governmental approval for the implementation of the Project by the end of October 2002.



ANNEX 1-1 SITE PLAN

ANNEX 1-2

Requested contents of facilities

	Requested functions	Requested rooms
I .Production Building	1. Ancillary area	1) Entrance hall 2) Changing rooms 3) Toilets 4) Rest space 5) Others
	2. Production area	
	2.1 Bulk production area	1)Documents room 2) Storage room for materials 3) Washing room 4) Preparation room 5) SPF eggs incubation room 6) Medium preparation area 7) Cell culture area 8) Virus culture area 9) Others
	2.2 Final production area	1)Record room 2) Storage room for materials 3) Preparation & Washing room 4) Ante -room 5) Final bulk composition area 6) Vial washing & sterilization room 7) Filling line room 8) Freeze-drying room 9) Capping room 10) Inspection room 11) Storage freezer room of final products 12) Storage cold room of WFI 13) Packaging room 14) Others
	3. Quality control area	1)Documents room 2) Cold room 3) Storage room for samples / materials 4) Others
	3.1 Clean area for cell culture & sterility test	1) Washing room 2) Preparation room 3) Ante-room 4) Cell culture area 5) Sterility test area 6) BSL 2 room 7) Others
	3.2 Chemical & Immunological test area	1) Chemical test room 2) Moisture content test room 3) Immunological test room & Laboratory 4) Others

Ⅱ. Animal Laboratory	4.1 Common area	1) Changing room 2) Toilet 3) Record room 4) Storage room for materials 5) Storage room for feed 6) Others
	4.2 Animal test area	1) Changing room 2) Animal quarantine room 3) Clean Storage room 4) Mice test room 5) Guinea pigs test room 6) Spare test room 7) Inoculation room 8) Autopsy room 9) Washing room 10) Others
Ⅲ. Mechanical Buildings	1. Power Supply	1) Substation room 2) Generator room
	2. A/C Plant	1) Chiller Room 2) Boiler room
	3. Water Supply	1) Water reservoir and pump room 2) Water treatment plant
	4. Medical Gas Supply	1) Compressed /Vacuum air machine room
	5. Sewage	1) Waste water treatment plant
	6. Others	
Ⅳ. Incinerator		

ANNEX 2

Requested Items of Equipment

Name of area and room	*Name of Equipment*	Priority
1. Production Building		
2. Production area		
2.1 Bulk production area		
3) Washing room & Preparation room	*Large Autoclave*	A
	Large Dry Oven	B
	Plasma Sterilising Machine	E
5) SPF eggs incubation room	*Egg Incubator*	D
	Electric Cleaner	D
	Incubator for Egg Stock	D
	Candling set	D
6) Medium preparation	*Pooling Tank(100l)*	A
	Pooling Tank(200l)	A
	Pooling Tank(small)	C
	Pump	D
	Electric Balance(15kg)	D
	Electric Balance(2kg)	D
	Electric Balance(300kg)	D
	Weight for calibration	C
	Freezer(-30 ℃)	B
	Electric Cleaner(HEPA)	D
	Air Verocity Mater	D
	Filtration Device	A
	Integlity testmachine	B
	Table for Integlity testmachine	D
	pH meter	D
	Stirrer	D
	Stainless container	D
	Water bath	D
	Personal computer	D
	Vaccum pump	D
	Carriage	D
	Balance Table	D
7) Cell culture	*Microscope*	D
	Cell counter(manual)	D
	Water Bath	D
	Hand Washer	D
	Hand Alcohol splay	D

Name of area and room	*Name of Equipment*	Priority
	Cell centrifuge	B
	Magnetic Stirrer(large)	D
	Magnetic Stirrer(ordinary)	D
	Icemaker	D
	Trypsinaization set	D
	Eggs Opening kit	D
	Electric Dispenser(100cc)	C
	Carriage(3shelfs)	D
	Carriage	D
	Carriage	D
8) Virus culture	*Electric Dispenser(200cc)*	D
	Electric Dispenser(20cc)	C
	Pooling Tank	A
	Filtration Device	C
	Integlity testmachine	B
	Autoclave	A
	Hand Washer	D
	Hand Alcohol splay	D
	Deep Freezer(-70 ℃)	A
	Vacuum Pump	D
	Electric Balance	D
	Microscope	D
	Manual Mixing device	D
	Icemaker	D
2.2 Final production area		
3) Washing room and Preparation room	*Hand Alcohol splay*	D
	Large Autoclave	A
	Carriage(3shelfs)	D
	Carriage(1shelf)	D
	Large Dry Oven	B
6) Final bulk composition	*Pooling Tank*	A
	Formalin Perfusion System	B
7) Vial washing & sterilization room	*Vial Washing Machine*	A
	Drying Sterilizing Cooling Tunnel	A
8) Filling line room	*Tray Loading Machine*	A
	Filling Machine	A
	Stopper Washing and Sterilization Machine	A
	Stopper Handling Unit	A
9) Freeze-drying room	*Freeze Dryer*	A

Name of area and room	*Name of Equipment*	Priority
10) Capping room	*Capping Machine(including in Filling Machine)*	
	Table & Lamp stand for Visual inspection	D
14) Packaging room	*Labelling Machine*	A
	Printing Machine	A
3. Quality control area		
3) Storage room for samples	*Freezer(-20 ℃)*	B
	Refrigerator	D
	Deep Freezer(-70 ℃)	B
3.1 Clean area for cell culture & sterility test		
1) Washing &Preparation room	*Dryer*	D
	Dry Oven	D
	Pipet Washer	D
	Autoclave	A
	Icemaker	D
4) Cell culture	*Hand Washer*	D
	Hand Alcohol splay	D
	CO2 Incubator	B
	Centrifuge	B
	Microscope Fluorescent Type	B
	Water Bath(large)	D
	Water Bath(Small)	D
	Lab. Autoclave	B
	Test Tube Mixer	D
	Rotator for Microtiter Plate	D
	Clean Bench	A
	Cell Centrifuge	B
	Microscope(Inverted)	B
	Microscope	D
	Magnetic Stirrer	D
	N2 Liquid Stocker	D
	Refrigerator(4 ℃)	D
	Deep Freezer(-70 ℃)	B
	Freezer(-20 ℃)	D
	Incubator(58 ℃)	D
5) Sterility test	*Incubator(23 ℃)*	D
	Incubator(37 ℃)	D
	Filtration Device for mycoplasma	C
	Filtration Device for bacteria	D

Name of area and room	*Name of Equipment*	Priority
	Vacuum Pump	D
	Incubator(31 ℃)	D
6) BSL 2 room	*Hand Alcohol splay*	D
	Lab. Autoclave	D
	Incubator(31 ℃)	D
	Safety Cabinat	B
	Incubator(23 ℃)	D
	Incubator(37 ℃)	D
3.2 Chemical & Immunological test area		
1) Chemical test room	*pH meter*	D
	Balance Table	D
	PC Bottle	D
	Purified Water Equipment	A
	Osmometer	B
	Mixer	D
	Hot Plate	D
	Equipment Balance(Macro)	D
	Equipment Balance(Micro)	D
	Desicator	D
	Pipet Washer	D
	Draft chamber	A
	Water Bath	D
	Endotoxin Analyser	B
2) Moisture content test room	*Desicator*	D
	Balance Table	D
	Moisture Content Apparatus	B
	Rotator for Microtiter Plate	D
	Plate Washer	D
	ELISA reader	B
	Mixer	D
4)Laboratory for experiments	*Lab. Autoclave(for Test)*	D
	Lab. Autoclave(for dirty)	D
	Microscope	D
	Clean Bench	B
	Incubator(31 ℃)	D
	Incubator(35 ℃)	D
	Mixer	D
	Incubator (37 ℃)	D
	Pipet	D
	Freez Dryer for QC	B
	Mercury Vaporizer Unit	D
	Total Organic Carbon Analyzer	B

Name of area and room	*Name of Equipment*	Priority
	Liquid Chromatography Electrospray Lonization	A
	Conductivity Meter	D
	Automatic Potentiometric Titrator w/ Printer	C
	Particle Counter for Pharmaceutical Injections	B
	Polarimater	B
II. Animal Laboratory		
4.1 Common area		
4.2 Animal test area		
	Freezer(-20 ℃)	D
	Cage for Mice	D
	Cage for Rabbits	D
	Cage for Guinea Pigs	D
	Rack for Mice Cage	D
	Rack for Rabbits Cage	D
	Rack for Guinea Pigs Cage	B
	Mice water bottle	D
	Rabbits water bottle	D
	Guinea Pigs water bottle	D
	Operation table for Mice	D
	Operation table for Rabbits	D
	Operation table for Guinea Pigs	D
	Feeding Container	D
	Electrical Balance for Rats(1kg)	D
	Electrical Balance for Mice(200g)	D
	Hand Washer	D
	Hand Alcohol splay	D
	Autoclave	A
	Formalin Perfusion System	B
	Aqua Filter System	D
	Feed Container	D
	Autopsy kit	D
5. Common Equipment		
	Water purification system	A
	Syphon Dispenser	A
	Glassware	C
	Plastic materials	C

Name of area and room	*Name of Equipment*	Priority
	Metallic materials	C
	Chemicals	D
	Machinery Maintenance Tools	B
	Electronic Service Tools	B
	Airconditioner Maintenance Tools	B
	Laundry Machine	D
	Materials for Clean room	B
	Stainless steel made working table(for all clean rooms)	B
	Dust free and autoclavable garments for clean area	A
	Particle counter(Handy)	B
	Particle counter(System)	B
	Stainless steel wagon(for all clean rooms)	C
	Materials for Clean room	B
	Themomiter (wireless)	C
	Air Tester	B
3. Quality control area		
3.2 Chemical & Immunological test area		
4)Laboratory for experiments	*Conductivity Meter*	D
	Cabinet	E
	Work Table(Laboratory Table)	B
	Others	

Priority;

A; Items expensive and essential for measles vaccine production with the least availability in Viet Nam.

B; Items expensive and essential for measles vaccine production with domestic availability in Viet Nam.

C; Items relatively inexpensive and essential for measles vaccine production with the least availability in Viet Nam.

D; Items relatively inexpensive and essential for measles vaccine production with domestic availability in Viet Nam.

E; Items not essential for measles vaccine production.

ANNEX 3

Tentative Schedule of Technology Transfer for Measles Vaccine Production in Viet Nam