

Annex 13 List of the Equipment Necessary for the Implementation of the Project

1. IEC 335

Field	Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC335-1 Cl. 7	Petroleum Spirit	1	P	Philippines
IEC335-1 Cl. 8	Standard Test Finger(w Joint)	1	U	
IEC335-1 Cl. 8	Standard Test Finger(w/o Joint)	1	U	
IEC335-1 Cl. 8	Test Pin	1	U	
IEC335-1 Cl. 8	Test Probe	1	P	Japan
IEC335-1 Cl. 8	Push-pull Scale(Approx.100N)	2	U	
IEC335-1 Cl. 8	Storage Oscilloscope	1	P	Japan
IEC335-1 Cl. 8	Probe	1	P	Japan
IEC335-1 Cl. 10	Digital AC Power Meter	2	P	Japan
IEC335-1 Cl. 11	Thermal Recorder(30-point)	2	P	Japan
IEC335-1 Cl. 11	Thermal Recorder(20-point)	3	P	Japan
IEC335-1 Cl. 11	Thermocouple (CA, 100m)	2	P	Japan
IEC335-1 Cl. 11	Thermocouple (IC, 100m)	2	P	Japan
IEC335-1 Cl. 11	Thermocouple (CC, 100m)	2	P	Japan
IEC335-1 Cl. 11	Black painted plywood(Test Corner)	1	P	Philippines
IEC335-1 Cl. 13	Leakage Current Meter	1	P	Japan
IEC335-1 Cl. 13	Dielectric Strength Tester	3	U	
IEC335-1 Cl. 13	Isolating transformer	1	P	Japan
IEC335-1 Cl. 15	Walk-in Environmental Test Chamber	1	P	Japan
IEC335-1 Cl. 15	Temperature / Humidity Chamber	1	U	
IEC335-1 Cl. 15	Vertical Rain Apparatus	1	Note 1	
IEC335-1 Cl. 15	Splash Apparatus	1	Note 1	
IEC335-1 Cl. 15	Spray Apparatus	1	P	Japan
IEC335-1 Cl. 16	Insulation Resistance Meter	3	U	
IEC335-1 Cl. 20	Stability Test Apparatus	1	P	Philippines
IEC335-1 Cl. 20	Weight	1	P	Philippines
IEC335-1 Cl. 20	Push-pull Scale(Approx.300N)	2	U	
IEC335-1 Cl. 21	Impact Hammer	2	U	
IEC335-1 Cl. 21	Polyamide board	1	P	Philippines
IEC335-1 Cl. 22	Torque Tester(Direct Plug-in)	1	P	Japan
IEC335-1 Cl. 22	Test nail	1	P	Japan
IEC335-1 Cl. 25	Flexing test Apparatus	1	P	Japan
IEC335-1 Cl. 25	Torque Driver	2	U	
IEC335-1 Cl. 27	Earth Continuity Tester	1	U	
IEC335-1 Cl. 28	Torque Driver	1	U	

NOTE

U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

Field	Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC335-1 Cl. 29	Push-pull Scale(Approx.2N)	1	P	Japan
IEC335-1 Cl. 29	Outside Micrometer	3	U	
IEC335-1 Cl. 29	Vernier Caliper	4	U	
IEC335-1 Cl. 30	Ball Pressure Apparatus	1	U	
IEC335-1 Cl. 30	Temperature Chamber(for Ball Pressure)	1	U	
IEC335-1 Cl. 30	Hot-Mandrel Test Apparatus	1	U	
IEC335-1 Cl. 30	Glow-Wire Test Apparatus	1	U	
IEC335-1 Cl. 30	Needle-Flame Apparatus	1	U	
IEC335-1 Cl. 30	Arc Tracking Test Apparatus	1	U	
IEC335-1 ETC.	AC Volt Meter(150V/300V)	3	U	
IEC335-1 ETC.	AC Ammeter(100A)	7	U	
IEC335-1 ETC.	AC Ammeter(5/25A)	3	U	
IEC335-1 ETC.	AC Ammeter(2/10A)	3	U	
IEC335-1 ETC.	AC Ammeter(1/5A)	3	U	
IEC335-1 ETC.	AC Ammeter(2.5/5/10mA)	2	P	Japan
IEC335-1 ETC.	AC Volt & Ammeter	1	P	Japan
IEC335-1 ETC.	Slide Regulator	18	P	Japan
IEC335-1 ETC.	Switch Box	16	P	Philippines
IEC335-1 ETC.	Test Bench	16	P	Philippines
IEC335-1 ETC.	Test Table with Caster	4	P	Philippines
IEC335-1 ETC.	Digital Multimeter #1	1	P	Japan
IEC335-1 ETC.	Digital Multimeter #2	4	P	Japan
IEC335-1 ETC.	Thermohygrograph	3	P	Japan
IEC335-2-03 Cl. 2	Temperature Controller for Sole Plate	1	U	
IEC335-2-03 Cl. 11	3-point Support	1	U	
IEC335-2-03 Cl. 21	Drop Machine	1	U	
IEC335-2-03 Cl. 25	Flexing Test Apparatus	1	P(IEC335-1)	
IEC335-2-06 Cl. 2	Standard Test Pan for Hob Elements	4	P	Philippines
IEC335-2-06 Cl. 8	Long Test Pin	1	P	Japan
IEC335-2-06 Cl. 9	Load for Rotating	1	P	Philippines
IEC335-2-07 Cl. 10	Cotton Load(70cm x 70cm, 10kg)	1	P	Philippines
IEC335-2-07 Cl. 11	Hot Water Equipment	1	P	Japan
IEC335-2-07 Cl. 15	Standard Detergent	1	P	Philippines
IEC335-2-07 Cl. 22	Water Pressure Apparatus	1	P	Japan
IEC335-2-07 Cl. 22	Tacho Meter	1	P	Japan
IEC335-2-11 Cl. 11	Temperature Probe	1	Note 2	
IEC335-2-11 Cl. 22	Water Pressure Apparatus	1	P(IEC335-2-07)	

NOTE

U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

Field	Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC335-2-24 Cl. 11	Apparatus for Water Evaporation	1	P	Japan
IEC335-2-25 Cl. 5	Microwave Servey Meter	1	P	Japan
IEC335-2-40 Cl. 10	Built-in Chamber	1	P (Note 3)	Japan
IEC335-2-40 Cl. 19	30mA Circuit Breaker	1	P	Philippines
Calibration Equipment	Universal Calibration	1	P	Japan
Calibration Equipment	Current Shunt	1	P	Philippines
Calibration Equipment	Standerd Resister	3	P	Philippines
Information & Diffusion	Facsimile	1	U	
Information & Diffusion	Copying Machine	1	U	
Information & Diffusion	Personal Computer with software	4	I (Note 4)	Japan
Information & Diffusion	Color Printer	1	P (Note 4)	Japan
Information & Diffusion	Laser Printer	1	U	
Information & Diffusion	Copy Board(Electronic Board)	1	U	
Information & Diffusion	Calculator	3	U	
Information & Diffusion	TV Monitor	1	U	
Information & Diffusion	VCR	1	U	
Information & Diffusion	Vehicle	1	I	Japan

NOTE  
 U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

2. IEC 65

Field		Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC65	Cl. 5	Petroleum Spirit	1	P	Philippines
*IEC65	Cl. 6	Laser Measuring Apparatus	1	Note 5	
*IEC65	Cl. 6	X-ray Measuring Apparatus	1	P	Japan
IEC65	Cl. 7	Digital AC Power Meter	share with IEC335		
IEC65	Cl. 7	Thermal Recorder(30-point)	share with IEC335		
IEC65	Cl. 7	Thermal Recorder(20-point)	share with IEC335		
IEC65	Cl. 7	Test Corner	share with IEC335		
IEC65	Cl. 7	Thermocouple (CA, 100m)	share with IEC335		
IEC65	Cl. 7	Thermocouple (IC, 100m)	share with IEC335		
IEC65	Cl. 7	Thermocouple (CC, 100m)	share with IEC335		
IEC65	Cl. 7	Vicat Tester	1	U	
IEC65	Cl. 8	Temperature Chamber(Approx.200 deg.C)	1	U	
IEC65	Cl. 8	Standard Test Finger(w Joint)	share with IEC335		
IEC65	Cl. 8	Standard Test Finger(w/o Joint)	share with IEC335		
IEC65	Cl. 8	Test Hock	1	P	Japan
IEC65	Cl. 9	Dielectric Strength Test Apparatus	share with IEC335		
IEC65	Cl. 9	Outside Micrometer	share with IEC335		
IEC65	Cl. 9	Walk-in Environmental Test Chamber	share with IEC335		
IEC65	Cl. 9	Scratch Test Apparatus	1	P	Japan
IEC65	Cl. 9	Test Chain	1	P	Japan
IEC65	Cl. 9	Test Pin	share with IEC335		
IEC65	Cl. 9	Test Probe	1	P	Japan
IEC65	Cl. 9	Torque Driver	share with IEC335		
IEC65	Cl. 9	Vernier Caliper	share with IEC335		
IEC65	Cl. 9	Winding Wire Test Apparatus	1	P	Japan
IEC65	Cl. 9	Filter for Leakage Current	1	P	Japan
IEC65	Cl. 10	Dielectric Strength Test Instrument	1	P	Japan
IEC65	Cl. 10	Insulation Resistance Meter	share with IEC335		
*IEC65	Cl. 10	Serge Test Apparatus	1	P	Japan
IEC65	Cl. 11	Spark Tester	1	P	Japan
IEC65	Cl. 12	Bump Test Apparatus	1	Note 6	
IEC65	Cl. 12	Impact Hammer	share with IEC335		
IEC65	Cl. 12	Tumbling Barrel	1	U	
*IEC65	Cl. 12	Test Plug for Antenna	1	P	Japan
IEC65	Cl. 12	Vibration Test Apparatus	1	P (Note 7)	Japan
IEC65	Cl. 14	2V-2F Test Apparatus	1	P	Japan

NOTE

U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

Field	Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC65	Cl. 14 Needle-Flame Test Apparatus			share with IEC335
IEC65	Cl. 14 Switch Test Apparatus(Endurance Test)			share with IEC335
*IEC65	Cl. 14 Shunt Resistor	2	P	Japan
IEC65	Cl. 15 Earth Continuity Tester			share with IEC335
IEC65	Cl. 15 Torque Tester(Direct Plug-in)			share with IEC335
IEC65	Cl. 16 Flexing test Apparatus	1	P (Note 8)	Japan
*IEC65	Cl. 18 CRT Test Apparatus(Steel Ball)	1	P	Japan
*IEC65	Cl. 18 CRT Test Apparatus(Test Box)	1	P	Philippines
IEC65	Cl. 19 Tilt Test Apparatus			share with IEC335
IEC65	Cl. 20 Flammability Test Apparatus			share with IEC335
IEC65	App. A Splash Apparatus	1	Note 9	
IEC65	ETC. AC Ammeter(20/100mA)			share with IEC335
IEC65	ETC. AC Ammeter(50/250mA)			share with IEC335
IEC65	ETC. AC Ammeter(100/500mA)			share with IEC335
IEC65	ETC. AC Ammeter(0.2/1A)			share with IEC335
IEC65	ETC. AC Ammeter(0.5/2.5A)			share with IEC335
IEC65	ETC. AC Ammeter(1/5A)			share with IEC335
IEC65	ETC. AC Ammeter(2/10A)			share with IEC335
IEC65	ETC. AC Ammeter(5/25A)			share with IEC335
IEC65	ETC. AC Volt & Ammeter			share with IEC335
*IEC65	ETC. Color-bar Generator	1	P	Japan
IEC65	ETC. DC Ammeter(0.1/0.3/1/3A)	3	P	Japan
IEC65	ETC. DC Ammeter(1/3/10/30A)	3	P	Japan
IEC65	ETC. Digital Multimeter #1			share with IEC335
IEC65	ETC. Digital Multimeter #2			share with IEC335
*IEC65	ETC. Electrostatic Voltmeter	1	P	Japan
*IEC65	ETC. High Voltage Probe	1	P	Japan
*IEC65	ETC. Low Resistance Meter	1	P	Japan
IEC65	ETC. Storage Oscilloscope			share with IEC335
*IEC65	ETC. Oscilloscope	1	P	Japan
*IEC65	ETC. PAL Generator	1	P	Japan
*IEC65	ETC. Random Noise Generator & Filter	1	P	Japan
IEC65	ETC. Resistance Load Set	2	P	Japan
IEC65	ETC. Variable Resistance Set	7	P	Japan
IEC65	ETC. Push-pull Scale(Approx.100N)			share with IEC335
IEC65	ETC. Push-pull Scale(Approx.300N)			share with IEC335
IEC65	ETC. Torque Driver #1			share with IEC335

NOTE

U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

Field	Equipment/Machinery	Q'ty	Availability (Refer to Footnote)	If to be procured, by Jap. or Phil.
IEC65	ETC.	Torque Driver #2	share with IEC335	
*IEC65	ETC.	True RMS. AC Voltmeter/AC Ammeter	1	P Japan
IEC65	ETC.	Slide Regulator	share with IEC335	
IEC65	ETC.	Switch Box	share with IEC335	
IEC65	ETC.	Test Bench	share with IEC335	
IEC65	ETC.	Test Table with Caster	share with IEC335	
Information & Diffusion	Facsimile	share with IEC335		
Information & Diffusion	Copying Machine	share with IEC335		
Information & Diffusion	Personal Computer with software	share with IEC335		
Information & Diffusion	Laser Printer	share with IEC335		
Information & Diffusion	Copy Board(Electronic Board)	share with IEC335		
Information & Diffusion	Calculator	share with IEC335		
Information & Diffusion	TV Monitor	share with IEC335		
Information & Diffusion	VCR	share with IEC335		

NOTE  
U:Existing and to be used. R:Existing but to be replaced. I:Existing but to be increased in no. P:To be procured

## Note

Both sides agreed that the equipment below were excluded in principle from the equipment to be provided for the Project with the following reasons.

### 1 Vertical Rain & Splash Apparatus

- (1) The frequency of the usage is expected to be rather low.
- (2) The other equipment to be provided, that is, Spray Test Apparatus may be substituted for this.
- (3) The following conditionality to install and operate the equipment are regarded to be rather severe to meet:
  - a To prepare the infrastructure to supply and drain water;
  - b To purify the water upon supply

### 2 Temperature Probe

The existing thermo-couple can be substituted for this.

### 3 Built-in Chamber

As for this equipment, if the cheaper equipment with the same specification can be procured locally, there exists some possibility to reconsider to be provided and installed in the new building for BPSTC on condition that the said building is completed with the appropriate remaining period for the technical cooperation.

- (1) The price is rather expensive (approximately 100 million yen) if procured in Japan.
- (2) Taking the efficiency of the testings into consideration, the equipment should be on site, however, the said equipment is available at Fuel and Appliance Testing Laboratory, thus BPSTC may visit there if necessary.
- (3) The following conditionality to install and operate the equipment are regarded to be rather severe to meet:
  - a To prepare the infrastructure to supply and drain water;
  - b To purify the water upon supply

### 4 Personal Computers and Color Printer

The said equipment are regarded as OA equipment not as necessary tools for the technology transfer.

### 5 Laser Measuring Apparatus

- (1) The frequency of the usage is expected to be rather low.
- (2) In addition to the knowledge and technology regarding the testing for the said equipment itself, the special knowledge and technology for optics are required, which is regarded as rather hard to be transferred during the term of technical cooperation.
- (3) The price is rather expensive (approximately 10 million yen) if procured in Japan.

### 6 Bump Test Apparatus

The test can be implemented manually without this equipment.



7 Vibration Test Apparatus

As for this equipment, if the cheaper equipment with the same specification can be procured locally, there exists some possibility to reconsider to be provided on condition that the following (2) and (3) are to be solved.

- (1) The frequency of the usage is expected to be rather low.
- (2) As this is a precision machine, the level of required maintenance is rather complicated and high to be achieved.
- (3) As this machine generates vibration, it will affect the operation of other equipment and thus the special condition on installation and operation are required, which is regarded as very expensive and hard to be implemented.

8 Flexing Test Apparatus

The existing equipment can be substituted for the said equipment so long as the present PNS is in effective.

However, the Team recommended the Philippine side and the latter agreed that once the existing PNS is aligned in with IEC, the latter should consider to introduce this on that occasion.

9 Splash Apparatus

The frequency of the usage is expected to be almost zero with reference to the testing of electronic appliances



**Supplement Chart for Annex 13**

	Specification	Q'ty
<b>Petroleum Spirit</b>		
Contents	Petroleum Spirit: Aliphatic solvent hexane having a maximum aromatics content of 0.1% by volume, a kauri-butanol value of 29, an initial boiling point of approx. 65 deg.C., a dry point of approx. 69 deg.C. and a specific mass of approx. 0.66kg/l	-
<b>Test Probe</b>		
Contents	Refer to IEC335-1 Fig. 3 "Test Probe"	1
<b>Storage Oscilloscope</b>		
Number of input channels	4	1
Vertical resolution	8bits (normal) (25LSB/div) 9bits (smoothing) 12bits (after averaging with 256 weight)	
Max sampling rate	Normal 200MS/s (when half of the number of available channels are in use) 100MS/s (when all channels are in use) Equivalent time 20GS/s	
Effective storage frequency (-3dB):	Repetitive waveform DC to 150MHz Single shot waveform DC to 80MHz (when half of the number of available channels are in use) DC to 40MHz (when all channels are in use)	
Sensitivity	1mV/div to 5V/div	
DC accuracy	100mV/div +/- (1.5% of 8div + 1LSB) 1mV/div +/- (5% of 8div + 1LSB) Other ranges +/- (2.5% of 8div + 1LSB)	
Offset voltage accuracy	1m to 50mV/div +/- (2.5% of set value +0.2mV) 100m to 500mV/div +/- (1% of set value +2mV) 1 to 5V/div +/- (2.5% of set value +20mV)	
Interchannel isolation	-40dB (typical value in the same range)	
Sweep time	5ns/div to 50s/div	
Time axis accuracy	+/- (0.01% + 500ps)	
Max record length	120kwords (2channels use) 56kwords (3 or 4 channels use)	
External trigger input	Range: +/-6V Level: 1.5V/0.15V Frequency range:DC to 16MHz	
Types of supported disks	640KB, 720KB, 1.2MB, 1.44MB	
Format	MS-DOS	
Printing method	Thermal line dot method	
Dot density	6dots/mm	
Paper width	112mm	
Demensions	(W) x (H) x (D)mm	
Weight	Approx. kg	
Accessories	Recording paper:50 pcs.	
<b>Probe(for Storage Oscilloscope)</b>		
Nominal Length	10ft.	1
Attention	1000x	
Bandwidth	75MHz	
Rise Time	4.0 ns	
Loading	100Mohm/3pF	
Max Input V	20kV	
In pF DC or RMS	7 to 49	
Readout	No	

*Qu*

*Zyky*

	Specification	Q'ty
<b>Digital AC Power Meter</b>		2 set
Display update period	Selectable from 100ms, 250ms, 500ms, 2s, and 5s	
Peak hold function	Vpk and Apk can be held at maximum value.	
Response time	Maximum of twice the display update rate + 100ms	
Display scaling function	The display of PT ratio, CT ratio and power scaling factor can be scaled.	
Resolution	The decimal point position and unit are determined in such a way that the resolution of the voltage or current range, 300000, is not exceeded	
Setting range	0.0001 to 10000	
Operating temperature range	5 to 40 deg.C	
Storage temperature	-25 to 60 deg.C	
Operating humidity range	20 to 80%RH (no condensation)	
Warm-up time	Approx. 30minutes	
Insulation resistance	At least 50Mohms at 500VDC	
Withstand voltage	3700VAC 50/60Hz for 1 min. (between each terminal and case, between terminals, between each terminals and power plug) 1500VAC 50/60Hz for 1 min. (between case and power plug)	
Rated supply voltage	230 - 240VAC	
Rated supply frequency	50/60Hz	
Allowable supply frequency variation	48 to 63Hz	
Power consumption	130 VA max	
External dimensions	426(W) x 132(H) x 400(D)mm	
Weight	Approx. 9kg	
<b>Thermal Recorder (30-point)</b>		2set
Number of Input Cannels	10 to 30 channels	
Measurement Interval	0.5, 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 seconds.	
Recording Method	Rector scan method, 10-color wire dot recording	
Effective recording width	250mm	
Display	VFW display (5 x 7 dot matrix, 3 lines)	
Software	Specify "0" when "-0" is selected as the memory code	
Input channel	30ch	
Input	Universal input, screw	
Power Supply Voltage	100 to 240VAC	
Demensions	438(W) x 291(H) x 336(D)mm	
Weight	Approx. 13kg	
Accessories	10-color ribbon: 10 pcs, Recording paper(20m):200 pcs.	
<b>Thermal Recorder (20-point)</b>		3 set
Measurement Interval	2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 seconds	
Number of Channel	20ch	
Recording Method	Rector scan method, 10-color wire dot recording	
Effective recording width	150mm (for dot recording)	
Display	VFW display (5 x 7 dot matrix, 3 lines)	
Software	Data conversion software unnecessary (Specify "0" when "-0" is selected as the memory code)	
Input channel	20ch	
Input	Universal input, screw	
Power Supply Voltage	100 to 240VAC	
Demensions	338(W) x 221(H) x 335(D)mm	
Weight	Approx. 9.3kg	
Accessories	10-color ribbon: 10 pcs, Recording paper(20m):200 pcs.	

	Specification	Q'ty
<b>Thermocouple (CA, 100m)</b>		2
Coating type	Glass wool	
Operating temp. range	+20 to +500 deg.C	
Element lead type	K	
Element lead diameter	0.32mm	
Finished dimensions	2 x 3mm	
Resistance	12.1ohms/mm	
<b>Thermocouple (IC, 100m)</b>		2
Coating type	Teflon(water-, heat-, chemical-resistant)	
Operating temp. range	+20 to +200 deg.C	
Element lead type	J	
Element lead diameter	0.32mm	
Finished dimensions	2 x 3mm	
Resistance	7.6ohms/mm	
<b>Thermocouple (CC, 100m)</b>		2
Coating type	Teflon(water-, heat-, chemical-resistant)	
Operating temp. range	+20 to +200 deg.C	
Element lead type	T	
Element lead diameter	0.32mm	
Finished dimensions	2 x 3mm	
Resistance	6.3ohms/mm	
<b>Black painted plywood(Test Corner)</b>		-
Contents	Dull black-painted plywood approx. 20 mm	
<b>Leakage Current Meter</b>		1
Contents	Refer to IEC335-1 Annex G	
<b>Isolating transformer</b>		1
Contents	Refer to IEC335-1 Clause 13.3 Note 3 and Fig. 8 Diagram for electric strength test at operating temperature	
<b>Walk-in Environmental Test Chamber</b>		1
PERFORMANCE SPEC		
Temperature range	-10 to +80deg.C	
Humidity range	10 to 90%R.H.	
Temperature constancy	+/-0.3deg.C	
Humidity constancy	+/-2.5%R.H.	
Humidity uniformity	+/-5.0%R.H.	
Temp. pull-down rate	within 120min. from +20 to -10deg.C	
Temp. heat-up rate	within 60min. from +20 to +80deg.C	
GENERAL SPEC.		
Supply voltage	380V, 3P, 60 Hz	
Floor load capacity	600kg/sq.m	
DEMENSIONS		
External demension	Approx. 4200 (W) x 2300 (H) x 2100 (D)	
Internal demension	Approx. 4000 (W) x 2000 (H) x 2000 (D)	
Door(effective apace)	Approx. 1400 (W) x 1800 (H)	
Interir material	Stainless steel	
<b>Spray Apparatus</b>		1
Contents	Refer to IEC529 Clause 14.2.3 b) and Fig. 5 "Spray Nozzle"	

*Qv*

*WV*

	Specification	Q'ty
<b>Stability Test Apparatus</b>		1
Contents	Refer to IEC335-1 Clause 20.1	
<b>Weight</b>		-
Contents	Suitable for IEC335 Testing	
<b>Polyamide board</b>		-
Contents	Rockwell hardness of HR100, thickness of at least 8mm	
<b>Torque Tester (Direct Plug-in)</b>		1
Contents	Refer to IEC335-1 Clause 22.3	
<b>Test nail</b>		1
Contents	Refer to IEC335-1 Clause 22 and Fig. 10	
<b>Flexing test Apparatus</b>		1
Contents	Refer to IEC335-1 Clause 25.14 & Fig. 11 and IEC335-2-3 Clause 25	
<b>Push-pull Scale (approx. 2N)</b>		1
Scale divisions	50	
Range	3N	
<b>AC Ammeter (2.5/5/10mA)</b>		2
Principle	Moving coil	
Rated accuracy	+/-1.5% of full scale value	
Scale length	Approx. 88mm (3-1/2")	
Scale divisions	100	
Range	3 ranges 2.5/5/10mA	
Current loss	3V	
<b>AC Volt &amp; Ammeter</b>		1
Range	13 ranges 30/75/150/300/750V, 0.15/0.3/0.75/1.5/3/7.5/15/30A	
Approx. Volt-Ampere Loss	4.5VA in any voltage range 0.15 to 7.5A : 0.7VA 15A : 0.9VA 30A : 2VA	
Scale Div.	150	
<b>Slide Regulator</b>		18
Contents	Pri.:230V, Sec.:0-300V, 50/60Hz, 50A, 10kVA	
<b>Switch Box</b>		16
Contents	Circuit Breaker, Pilot Lamp, Terminal, Outlet	
<b>Test Bench</b>		16
Contents	Approx. 100 (D) x 150 (W) x 120 (H) cm	
<b>Test Table with Caster</b>		4
Contents	Approx. 80 (D) x 80 (D) x 120 (H) cm, with casters	

*Per*

*Wm*

	Specification	Q'ty
<b>Digital Multimeter #1</b>		1
Display	3.5digit LCD reading of 1999 and enunciators	
Range	Auto or manual ranging	
Over range indication	MSD 1 or -1 indication	
Polarity	Automatic no indication for positive polarity, minus (-) sign for negative polarity	
Low battery indication	"B" mark is displayed when the battery voltage drops below operating voltage	
Sampling	2 times/s	
Operational temperature	0 to 40deg.C 80%RH (max.)	
Storage temperature	-20 to 60deg.C 70%RH (max.)	
Size	186(W) x 57(H) x 180(D)mm	
Weight	Approx. 900g	
<b>Digital Multimeter #2</b>		4
Safety class	Based on IEC 348 class II	
Measuring method	Dual integration mode	
Display	4.5 digit LCD reading of 49999 and enunciators	
Range	Auto or manual ranging	
Polarity	Automatic no indication for positive polarity. Minus (-) sign for negative polarity	
Over range indication	"OL" indication	
Sampling	2 - 4times/second	
Operational temperature	0 - 40deg.C 80%RH max. (Non-condensing)	
Temperature coefficient	Specified accuracy x 0.1/deg.C (0 - 18deg.C & 28 - 40deg.C)	
Max. common mode voltage	+/-1000V peak	
Power supply	1.5V (AA size) x 2	
Size	87(W) x 190(H) x 39(D)mm	
Weight	Approx. 440g	
<b>Thermohygrograph</b>		3
Range	Temperature:-10deg.C to +50deg.C Humidity:10 to 99.9%R.H.	
Accessories	Recording paper:50 pcs.	
<b>Standard Test Pan for Hob Elements</b>		4
Contents	Refer to IEC335-2-6 Clause 2.2.29 and Fig. 101	
<b>Long Test Pin</b>		1
Contents	Refer to IEC335-2-6 Clause 8 and Fig. 102	
<b>Load for Rotating</b>		1
Contents	Refer to IEC335-2-6 Clause 9.1 and Fig. 103	
<b>Cotton Load (for Washing Machine)</b>		10kg
Contents	Pre-washed double-hemmed cotton sheets having dimensions of approx. 70cm x 70cm and mass between 140g/sq.m and 175g/sq.m in dry condition	
<b>Hot Water Equipment</b>		1
Water Capacity	200L	
Temperature	90deg.C	

*QR*

*Ush*

	Specification	Q'ty
<b>Standard Detergent</b>		-
Contents	The detergent consists of following: : Parts by mass - ethoxylated tallow alcohol(14 EO) : 6.4 - sodium soap(chain length C12 to 16:13 to 26% and C18 to 22: 74 to 84%) : 2.3 - sodium tripolyphosphate: 2.8 - sodium silicate(SiO <sub>2</sub> :76.75% and Na <sub>2</sub> O:23.25%): 35.0 - magnesium silicate: 1.5 - carboxy methyl cellulose: 1.0 - ethylenediane tetra-acetic-sodium-salt: 0.2 - optical whitener for cotton(dimorpholinostilbene type): 0.2 - sodium sulphate(as accompanying substance or added): 16.8 - water: 7.8 - sodium perborate tetrahydrate(supplied separately): 20.0	
<b>Water Pressure Apparatus</b>		1
Contents	Manual operate pressure pump with pressure meter, 1.2MPa max.	
<b>Tacho Meter</b>		1
Type	Non-contact type, Hanheld	
Contents	5000rpm max.	
<b>Apparatus for Water Evaporation</b>		1
Contents	Refer to IEC335-2-24	
<b>Microwave Survey Meter</b>		1
Contents	2450MHz Microwave survey meter, 10W/sq.m	
<b>Built-in Chamber</b>		1
Contents	same sa FATL facility	
<b>30mA Circuit Breaker</b>		1
Type	Earth leakage circuit breaker type	
Ratings	250v, 60A, 3P	
Leakage Current Meter	30mA	
<b>Universal Calibration</b>	"WAVETEK", Model 9100	1
Voltage	AC/DC Voltage: 1050V	
Current	AC/DC Current: 20A	
Resistor	Variable resistor: 40Mohms	
Capacitance	Variable capacitor:40mF	
Conductance	2.5 milliSiemens	
Others	It also generates digitally synthesized and phase-locked sine, square, triangle, waveforms, variable amplitude pulses to 10MHz, pluse widths to 2 Seconds, duty cycle between 0.05% and 99.95%, and all the waveforms required to calibrate oscilloscopes up to 600MHz	
<b>Current Shunt</b>	"Hewlett Packard", Model 3433A	1
<b>Standard Resistor</b>	"YOKOGAWA", Model 2792 1 ohm, 100ohms, 1000ohms	3

*Q*

*W*

	Specification	Q'ty
<b>Personal Computer with software</b> GALAXY8 Intel Pentium II 233Mhz	<ul style="list-style-type: none"> <li>- Genuine Intel Pentium II 233Mhz with 32KB L1 Cache</li> <li>- Original INTEL PD440 LX Mainboard</li> <li>- 512KB Burst Pipeline Secondary Cache</li> <li>- Built-in PCI-IDE Controller supporting up to 4 Hard Disk/ATAPI devices</li> <li>- Two Hi-speed 16550FN UART Serial Communication Port</li> <li>- One ECP/EPP Bi-directional Parallel Port</li> <li>- 32 SDRAM 168-pin</li> <li>- Seagate 2.100GB Hard Disk Drive</li> <li>- ADI Provista E30 14 inches SVGA Color Monitor</li> <li>- 1.44MB 3.5inches Floppy Disk Drive</li> <li>- ATX casing with 104-enhanced Windows 95 Keyboard</li> <li>- PS-2 Mouse with Pad, computer covers</li> <li>- Mitsumi 24x-speed CDROM with 16-bit soundcard</li> <li>- Typhoon 50Watt speakers</li> <li>- Licensed Windows 95 OEM CDROM</li> </ul>	4set
<b>Color Printer</b>	"CANON", Model BJC 4550(A3) for digital photograph printing	1
<b>Petroleum Spirit</b> Contents	Refer to IEC65 Clause 5.1 petroleum spirit or water	-
<b>Laser Measuring Apparatus</b> Contents	Refer to IEC65 Clause 6.2 and Appendix B	1set
<b>X-ray Measuring Apparatus</b> Contents	Refer to IEC65 Clause 6	1
<b>Test Hock</b> Contents	Refer to IEC65 Clause 8.2 & Fig. 4	1
<b>Scratch Test Apparatus</b> Contents	Refer to IEC65 Clause 9.3.6 & Fig. 12	1
<b>Test Chain</b> Contents	Refer to IEC65 Clause 9.1.2 & Fig. 5	1
<b>Test Probe</b> Contents	Refer to IEC65 Clause 9.1.5	1
<b>Winding Wire Test Apparatus</b> Contents	Refer to IEC851-5 Clause 4 Test 13: Breakdown voltage & Fig.1 & Fig. 2	1
<b>Filter for Leakage Current</b> Contents	Refer to IEC65 Clause 9.1.1	1
<b>Dielectric Strength Test Instrument</b> Contents	Refer to IEC65 Clause 10.3 and 14.3.1a) & Fig. 14	1
<b>Serge Test Apparatus</b> Contents	Refer to IEC65 Clauses 10.1, 14.1 and 14.2 & Fig. 7a) and 7b)	1

*Qw*

*Ww*

	Specification	Q'ty
<b>Spark Tester</b> Contents	Refer to IEC65 Clause 11.2 "High-frequency spark generator"	1
<b>Test Plug for Antenna</b> Contents	Refer to IEC65 Clause 12.5 & Fig. 19	1
<b>Vibration Test Apparatus</b> Frequency Amplitude Duration Load capacity Others	10Hz, 55Hz 0.35mm 30min. 100kg Refer to IEC65 Clause 12.1.2	1
<b>2V-2F Test Apparatus</b> Contents	Refer to IEC65 Clause 14.3.1	1
<b>Shunt Resistor</b> Ratings	50 mV, 100A	1
<b>Shunt Resistor</b> Ratings	50 mV, 20A	1
<b>Flexing test Apparatus</b> Contents	Refer to IEC65 Clause 16.4 & Refer to IEC227-2 Clause 3.1 and Fig. 1	1
<b>CRT Test Apparatus (Steel Ball)</b> Contents	40+1-0mm, Rockwell hardness of at least R62 Refer to IEC65 clause 18	1
<b>CRT Test Apparatus (Test Box)</b> Contents	for fixing CRT Refer to IEC65 Clause 18	1

*W*

*W*



	Specification	Q'ty
<b>Color-bar Generator</b>		1
<b>PATTERN</b>		
Cross hatch	16 x 20 (white on black background including one dot at the center of the screen)	
Center cross	1 x 1 (white on black background with cross at the center of the screen)	
Dots	15 x 19 (white on black background)	
Window	0.5 x 0.5 (white on black background)	
Rashers	Red, blue, green, white	
Color bars	EIRE : Conforms to RS-189A SMITE : Conforms to EIR-1-1978	
I, Q, W off	For the color signal, Q and I at the bottom of the screen.	
CHROME off	The chrominance component is eliminated from the color bar signal and the pattern is provided with luminance only.	
LUMMI off	The luminance component is eliminated from the color bar signal and the pattern is provided with chrominance only.	
<b>VIDEO OUTPUT</b>		
Output level	CAL : 1.0Vp-p (75ohms load) VAR : 0 to 1.5Vp-p (75ohms load)	
S output		
Output level	CAL : Y + S, 1Vp-p (SYNC to 100% white), C 286mVp-p (burst) VAR : +/-1% (both Y + S and C)	
RF out	Modulation type : Negative Output voltage : 60dBmicromin. Output impedance : 75ohms	
Sync signal output	Frequency : Horizontal and vertical frequencies Output voltage : Approx. 1Vp-p (open output) Output impedance : 75ohms	
<b>SUBCARRIER</b>		
Subcarrier frequency	NTSC : 3.579545MHz	
Frequency	Center frequency +/-100Hz (adjustable +/-5Hz)	
Output voltage	Approx. 1Vp-p (open output)	
Output impedance	75ohms	
Color burst	Minimum of 8 cycle at the back porch of the horizontal sync signal	
Temperature/humidity for operation	0 to 40deg.C RH85% or less	
Temperature/humidity for characteristics in spec	10 to 35deg.C RH85% or less	
Case dimensions	212(W) x 133(H) x 272(D)mm	
Maximum dimensions	212(W) x 156(H) x 298(D)mm	
Weight	Approx. 3.5kg	
<b>DC Ammeter(0.1/0.3/1/3A)</b>		3
Principle	Moving coil	
Rated accuracy	+/-0.5% of full scale	
Scale length	Approx. 135mm (5 -3/8").	
Scale divisions	100/150.	
Range	4 ranges 0.1/0.3/1/3A	
Approx. voltage drop	50mV	

*PR*

*Wky*

	Specification	Q'ty
<b>DC Ammeter (1/3/10/30A)</b>		3
Principle	Moving coil	
Rated accuracy	+/-0.5% of full scale	
Scale length	Approx. 135mm (5 -3/8").	
Scale divisions	100/150.	
Range	4 ranges 1/3/10/30A	
Approx. voltage drop	50mV	
<b>Electrostatic Voltmeter</b>		1
Measuring range	30V, 10V, 1V	
Generating and measuring ranges	+/-36.00V, +/-11.999V, +/-1199.99mV	
Accuracy (23 +/- 5deg.C)	+/- (0.1% of rdg + 2 digits)	
Resolution	10mV, 1mV, 100microV	
Display	LCD 4-1/2 digits Simultaneous display of generation / measurement is available. EL back-lit illumination	
Dielectric strength	500V DC for 1 minute (Between input and output terminals)	
Operating ambient temp./humidity	5 to 40deg.C, 20 to 80%RH	
Dimensions	Approx. 257 x 182 x 40mm	
Weight	Approx. 1.2kg	
<b>High Voltage Probe</b>		1
Maximum input	DC 60kV or Single shot pulse of 80kV	
Bandwidth	DC to 50MHz, -3dB	
Rise time	7ns or less	
Input RC	1000M ohm +/-5% // 5pF +/- 2pF	
Attenuation	2000 : 1 +/-5%	
Cable length	4m approx.	
Connector	BNC type	
Used for	Oscilloscope with input RC : 1M ohm, 20 to 50pf	
Size	88mm diameter / 338mm L	
Weight	3.5kg approx. including accessories	
<b>Low Resistance Meter</b>		1
Safety class	Based on IEC 348 class II	
Measuring method	Dual integration mode	
Display	4.5 digit LCD reading of 49999 and enunciators	
Range	Auto or manual ranging	
Polarity	Automatic no indication for positive polarity. Minus (-) sign for negative polarity	
Over range indication	"OL" indication	
Sampling	2 - 4times/second	
Operational temperature	0 - 40deg.C 80%RH max. (Non-condensing)	
Temperature coefficient	Specified accuracy x 0.1/deg.C (0 - 18deg.C & 28 - 40deg.C)	
Max. common mode voltage	+/-1000V peak	
Power supply	1.5V (AA size) x 2	
Size	87(W) x 190(H) x 39(D)mm	
Weight	Approx. 440g	

*Qu*

*W*

	Specification	Q'ty
<b>Oscilloscope</b>		1
CRT : type	150mm rectangular, post-accelerator type with inner graticule	
: Accelerating voltage	Approx. 2kV	
: Effective area	8 x 10 div. (1div. = 10mm)	
VERTICAL AXIS (Common for CH1, CH2)		
Operating modes	CH1, CH2, ADD, ALT, and CHOP	
Sensitivity	1mV/div to 5V/div (1mV/div., 2mV/div. +/-5%, 5mV/div. to 5V/div. +/-3%)	
Attenuator	1-2-5 steps, 12 ranges, and fine adjustment	
Frequency response DC	DC to 20MHz (-3dB) (5mV/div. to 5V/div.)	
Frequency response AC	DC to 5MHz (-3dB) (1mV/div. to 2mV/div.) 10Hz to 20MHz (-3dB) (5mV/div. to 5V/div.) 10Hz to 5MHz (-3dB) (1mV/div. to 2mV/div.)	
Rise time	Approx. 17.5ns (20MHz) (5mV/div. to 5V/div.) Approx. 70ns (5MHz) (1mV/div. to 2mV/div.)	
HORIZONTAL AXIS(CH2 input)		
Operating modes	Switch to X-Y on CH1 : Y-axis / CH2 : X-axis	
Frequency response	DC : DC to 500kHz (-3dB) / AC : 10Hz to 500kHz (-3dB)	
Sweep : sweep time	0.5micro.s/div. to 0.5s/div. +/-3% (0.2micro.s/div. : UNCAL) 1-2-5 steps, 20 ranges, and fine adjustment	
Triggering		
trigger sources	VERT, CH1, CH2, LINE and EXT	
: Mode	AUTO, NORM, FIX, TV-F and TV-L	
: Trigger coupling	AC, TV-F and TV-L	
EXTERNAL TRIGGER		
Input impedance	1Mohm, approx. 22pF	
Maximum input voltage	800Vp-p or 400V (DC + AC peak)	
Calibration voltage	1Vp-p +/-3% (Square wave, 1kHz, positive polarity)	
INTENSITY MODULATION		
Input voltage	TTL level (dims at Hi level)	
Input impedance	Approx. 5kohms	
Frequency response	DC to 3.5MHz	
Maximum input voltage	84Vp-p or 42V (DC + AC peak)	
CH1 SIGNAL OUTPUT		
Output voltage	Approx. 50mV/ddiv. (loaded 50ohms)	
Output impedance	Approx. 50ohms	
Frequency response	100Hz to 10MHz (within +/-3dB, loaded 50ohms)	
Environmental condition	10 to 35deg.C, 85% or less	
Dimensions	343(W) x 159(H) 431(H)mm	
Weight	Approx. 7kg	

*Am*

*W/B*

	Specification	Q'ty
<b>PAL Generator</b>		1
<b>PATTERNS</b>		
Color bar	From the left side of the screen 75% white, yellow, cyan, green, magenta, red, blue and black	
Crosshatch	15(V) x 11(H), white lines	
Dot	11(V) x 15(H), white dots	
Corner marker	White window at the upper right of the screen	
Raster	White, red, green and blue	
<b>SYNC SIGNAL</b>		
Horizontal frequency	15.625Hz	
Vertical frequency	50Hz	
Equalizing pulse	Yes	
Scanning	Interlace	
Subcarrier frequency	4.433619MHz +/- 220Hz	
<b>RF OUTPUT</b>		
VHF low	41.25 to 62.25MHz	
VHF high	175.25 to 224.25MHz	
UHF	471.25 to 855.25MHz	
Connector	PAL connector	
Output level	VHF : More than 1mV, UHF : More than 0.5mV	
<b>SOUND</b>		
Intercarrier frequency	5.5MHz	
Frequency	Approx. 1kHz	
Carrier output	On/Off selectable, the sound signal modulates RF output.	
<b>VIDEO OUTPUT</b>		
Output voltage	1Vp-p into 75ohms, AC coupling	
Reverse current protection	Within +/- 6Vp-p	
Output impedance	75ohms	
Size and weight	80(W) x 172(H) x 35(D)mm, 390g	
<b>Random Noise Generator &amp; Filter</b>		1
Noise frequency band	50kHz	
Probability density distribution	Gaussian, uniform, binomial, Poisson	
Output voltage	1Vrms into 600ohms	
Dimensions	429(W) x 99(H) x 350(D)mm	
Weight	7.9kg	
<b>Resistance Load Set (Dummy Load)</b>		2 each
Contents	Wire wound Fixed Resistor 3.2ohms+/-5%20W, 3.2ohms+/-5%750W, 4ohms+/-5%300W, 4ohms+/-5%750W, 6ohms+/-5%450W, 6ohms+/-5%750W, 8ohms+/-5%30W, 8ohms+/-5%750W	
<b>Resistance Load (Variable Resistor)</b>		1
Ratings	4800ohms, 0.18A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	

*Ch*

*Wky*

Specification		Q'ty
<b>Resistance Load(Variable Resister)</b>		1
Ratings	1400ohms, 0.35A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	
<b>Resistance Load(Variable Resister)</b>		1
Ratings	600ohms, 0.5A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	
<b>Resistance Load(Variable Resister)</b>		1
Ratings	170ohms, 1.0A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	
<b>Resistance Load(Variable Resister)</b>		1
Ratings	39ohms, 2.0A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	
<b>Resistance Load(Variable Resister)</b>		1
Ratings	10ohms, 4.0A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	
<b>Resistance Load(Variable Resister)</b>		1
Ratings	4.7ohms, 6.0A max.	
Rated accuracy	+/-20% of nominally value	
Withstand voltage	1000VAC for 1minute (between each terminal and case)	
Insulation resistance	500VDC, over 5 Mohms (between each terminal and case)	
Dimensions	520(W) x 85(H) x 130(D)mm	
Weight	2.7kg	

*pu*

*WJH*

	Specification	Q'ty
<b>True RMS. AC Voltmeter/AC Ammeter</b>		
Range	3Hz to 300kHz (333ms to 3.33micro.s)	1
Display	6.5digits	
1-year accuracy	0.01% (40Hz to 300kHz); 0.05% (3 to 40Hz)	
Resolution	10microHz to 1Hz	
Math functions	NULL, Min/Max/Av., dB, dBm, Limit Test	
Memory	512-reading internal storage	
Power line frequency	45 to 66Hz, 360 to 440Hz	
Power consumption	25VA peak	
Operating environment	0 to 55deg.C, full accuracy to 80%RH, 30deg.C	
Storage environment	-40 to 75deg.C	
Size	88.5mmH x 212.6mmW x 348.3mmD	
Weight	3.6kg	
Computer interface	HP-IB and RS-232C standard	
<b>Vehicle</b>		
Steering		1
Seating Capacity		
Engine		
Others	Air conditioner, AM/FM Radio+Cassette, Clock, FR Seat Belts and standard tropical specification for Philippines, standard tool set, Jack	

*Qu*

*W/ky*

**Annex 14 Necessary Renovation and Conditions Fulfilled by BPSTC**

LABORATORY ROOM	EQUIPMENT	SETTING REQUIREMENTS	TERMINATION DATE
LAB C	Walk-in Enviroment Test Chamber	<ul style="list-style-type: none"> <li>*Access space indicated in the specification should be ensured.</li> <li>*Power and humidity water supply should be easily obtainable.</li> <li>*Capacity fo electric source: 380V, 60Hz, Approx.60A, Approx.20kVA, 3P Allowed voltage: +/-5%</li> <li>*Humidity water supply: 6L/hr.(filtered)</li> <li>*Base of refrigerator unit(condenser unit) to be required at outside bulding.</li> <li>*Foundation : 3000(W)x900(D)x200(t) mm</li> </ul>	
	Testing space for Washing machine, etc.	<ul style="list-style-type: none"> <li>*Plastic(clear) curtain to be required aruond the space for water and humidity.</li> <li>*Drain port to be required and the drain port should not be higher than the floor level.</li> <li>*Ventilater(outlet) to be required.</li> </ul>	
LAB D	Abnormal and endurance Test room	<ul style="list-style-type: none"> <li>*Inflow of air from out side room should be ensured.</li> <li>*Door to be double wide with fire proof</li> <li>*Ventilator(outlet) to be required</li> <li>*Wall and celling: Fire proof material or concret block</li> <li>*Window: Glass with metal net</li> <li>*Fire alam</li> </ul>	
Others	Bldg. III  Power source arrangements(minimum)	<ul style="list-style-type: none"> <li>*Convert the present layout into a new layout indicated in the ANNEX xx.</li> <li>*Test benches: 230V, 30A, 60Hz for each bench</li> <li>*Testing space big appliances: 230V, 30A, 60Hz x 2</li> <li>*Abnormal Testing room: 230V, 50A, 60Hz and 230V, 30A, 60Hz</li> <li>*near Walk-in chamber: 380V, 50A, 60Hz(3P) and 230V, 30A, 60Hz</li> <li>*Near Water both area: 230V, 30A, 60Hz</li> <li>*Witness area: 230V, 30A, 60Hz</li> </ul>	

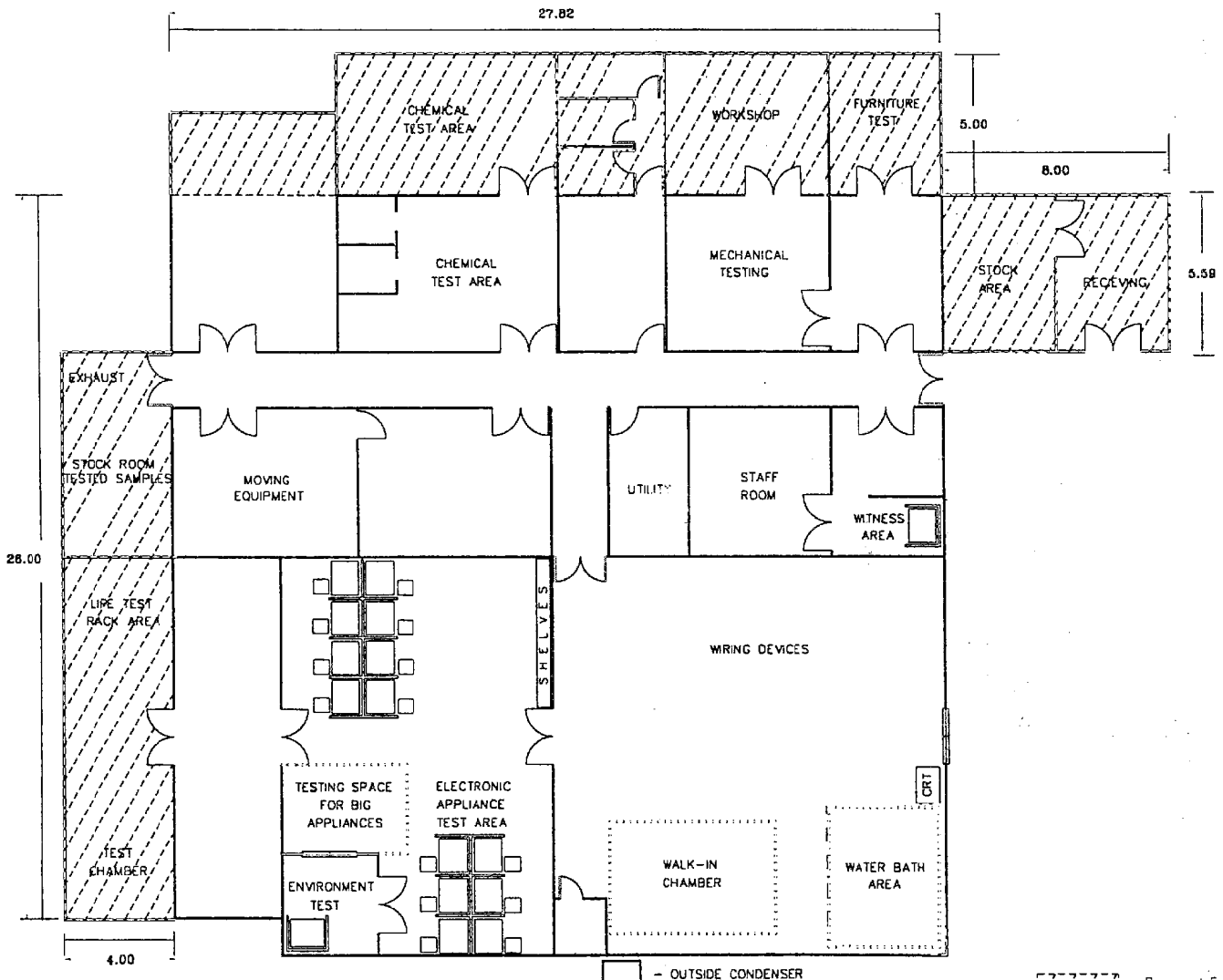
*Qw*

*kyky*

*Dr*

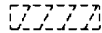
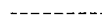
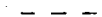
- 117 -


*W/M*



Annex 15 The layout of the Project Site

**BPSTC BLDG. III**  
(Dimensions are in meter)

-  Proposed Extension
-  Reallocation of Area
-  Vinyl

 - OUTSIDE CONDENSER



ACTIVITY	Year 1998												Year 1999												Year 2000
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1 Secure Budget from DBM	█	█	█																						
2 Preparation for Land				█	█																				
3 Tender for Building Design					█	█																			
4 Detailed Building Design						█	█	█																	
5 Tender for Building Construction								█	█	█															
6 Building Construction											█	█	█	█	█	█	█	█	█	█	█	█	█		
7 Final Inspection																					█	█			
8 BPSTC transfer to new building																							█	█	

*[Handwritten signature]*

*[Handwritten signature]*

**Annex 17 List of Existing Equipment and Machinery of BPSTC**

CODE	S/N	EQUIPMENT/MACHINERY	MANUFACTURER	MODEL	DESCRIPTION	S/N	CONDITION
EM	001	AC Ammeter	Yokogawa	2013-01	20/100mA	73AE3855	OK
EM	015	AC Ammeter	Yokogawa	2013-01	20/100mA	74AE2318	OK
EM	016	AC Ammeter	Yokogawa	2013-01	20/100mA	74AE2319	OK
EM	002	AC Ammeter	Yokogawa	2013-02	50/250mA	74AE0067	OK
EM	017	AC Ammeter	Yokogawa	2013-02	50/250mA	74AE1857	OK
EM	018	AC Ammeter	Yokogawa	2013-02	50/250mA	74AE1858	OK
EM	003	AC Ammeter	Yokogawa	2013-03	100/500mA	73AE5720	OK
EM	019	AC Ammeter	Yokogawa	2013-03	100/500mA	74AE2435	OK
EM	020	AC Ammeter	Yokogawa	2013-03	100/500mA	74AE2436	OK
EM	004	AC Ammeter	Yokogawa	2013-04	0.2/1A	73AE2920	OK
EM	021	AC Ammeter	Yokogawa	2013-04	0.2/1A	74AE2398	OK
EM	022	AC Ammeter	Yokogawa	2013-04	0.2/1A	74AE2470	OK
EM	005	AC Ammeter	Yokogawa	2013-05	0.5/2.5A	73AE5424	OK
EM	023	AC Ammeter	Yokogawa	2013-05	0.5/2.5A	74AE2684	OK
EM	024	AC Ammeter	Yokogawa	2013-05	0.5/2.5A	74AE2685	OK
EM	006	AC Ammeter	Yokogawa	2013-06	1/5A	74AE0214	OK
EM	025	AC Ammeter	Yokogawa	2013-06	1/5A	74AE1772	OK
EM	026	AC Ammeter	Yokogawa	2013-06	1/5A	74AE1773	OK
EM	007	AC Ammeter	Yokogawa	2013-07	2/10A	74AE0147	OK
EM	028	AC Ammeter	Yokogawa	2013-07	2/10A	74AE1854	OK
EM	027	AC Ammeter	Yokogawa	2013-07	2/10A	74AE2116	OK
EM	008	AC Ammeter	Yokogawa	2013-08	5/25A	74AE0028	OK
EM	029	AC Ammeter	Yokogawa	2013-08	5/25A	74AE2110	OK
EM	030	AC Ammeter	Yokogawa	2013-08	5/25A	74AE2615	OK
EM	045	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7002	OK
EM	046	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7050	OK
EM	047	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7192	OK
EM	048	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7221	OK
EM	044	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7233	OK
EM	049	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7248	OK
EM	050	AC Ammeter	Yokogawa	2013-14	10/20/50/100A	67AE7283	OK
EM	009	AC Volt Meter	Yokogawa	2013-16	30/75V	74AE0151	OK
EM	031	AC Volt Meter	Yokogawa	2013-16	30/75V	74AE2557	OK
EM	032	AC Volt Meter	Yokogawa	2013-16	30/75V	74AE2667	OK
EM	010	AC Volt Meter	Yokogawa	2013-17	75/150V	74AE0279	OK
EM	033	AC Volt Meter	Yokogawa	2013-17	75/150V	74AE2046	OK
EM	034	AC Volt Meter	Yokogawa	2013-17	75/150V	74AE2655	OK
EM	011	AC Volt Meter	Yokogawa	2013-18	150/300V	74AE0094	OK
EM	035	AC Volt Meter	Yokogawa	2013-18	150/300V	74AE2571	OK

*[Handwritten signature]*

*[Handwritten signature]*

CODE	S/N	EQUIPMENT/MACHINERY	MANUFACTURER	MODEL	DESCRIPTION	S/N	CONDITION
EM	036	AC Volt Meter	Yokogawa	2013-18	150/300V	74AE5749	OK
EM	051	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7121	OK
EM	052	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7216	OK
EM	054	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7254	OK
EM	055	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7257	OK
EM	056	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7273	OK
EM	053	AC Volt Meter	Yokogawa	2013-19	300/750V	67AE7281	OK
EE	013	Arc Tracking Test Apparatus	Hitachi	HAT-500-1	0-650V test voltage	M4538	Note 1
EE	014	Ball Pressure Test Apparatus	Excel	T-10.02			OK
EE	018	Bier Davis' Aging Tester	Yasuda	103-OX			OK
EI	028	Dielectric Strength Tester	Kikusui	TOS-5050	1.5/5kV, AC	14060743	OK
EI	007	Dielectric Strength Tester	Kikusui	TOS-5051	2.5/5kV, AC,DC	14020075	OK
EI	010	Dielectric Strength Tester	Kikusui	TOS-5101	5/10KV, AC,DC	14050073	OK
EI	003	Digital Multitester	Yokogawa	7533-01		94AE2490	OK
GE	004	Dust Chamber	Tabai			3290000040	OK
EI	009	Earth Continuity Tester	Clar	A-2-17-u802			OK
EE	023	Electric Wire Flammability Tester	Yasuda	No. 252			OK
EE	015	Glow Wire Test Apparatus	Hitachi	HAT-214		M4540	Note 2
EE	016	Hot Mandrel Test Apparatus	PTL	T-01.15		9402018	OK
MV	002	Impact Hammer	PTL	F22.16			OK
MV	001	Impact Hammer	PTL	F22.50			OK
GI	042	Inside Micrometer Set	Mitutoyo	245-511		3644640	OK
GI	003	Inside Micrometer Set	Mitutoyo	345-511		0190062	OK
GI	004	Inside Micrometer Set	Mitutoyo	345-512		3641158	OK
GI	043	Inside Micrometer Set	Mitutoyo	345-512		4034430	OK
EV	037	Insulated Transformer		YT-220-440			OK
EI	025	Insulation Resistance Meter	Yokogawa	3213-23		74LC01248	OK
EI	026	Insulation Resistance Meter	Yokogawa	3213-23		74LC01253	OK
EI	005	Insulation Resistance Meter	Yokogawa	3213-23			OK
EE	017	Needle Flame Test Apparatus	PTL	T-21.28		9402018.2	Note 3
GI	002	Outside Micrometer Set	Mitutoyo	293-949		3641684	OK
GI	041	Outside Micrometer Set	Mitutoyo	293-949		0183933	OK
GI	040	Outside Micrometer Set	Mitutoyo	293-949		3504247	OK
GI	059	Push-pull Scale	Imada	PS-10	10kg at 0.1kg	209348	OK
GI	060	Push-pull Scale	Imada	PS-10	10kg at 0.1kg	209362	OK
GI	061	Push-pull Scale	Imada	PS-30	30kg at 0.25kg	209365	OK
GI	062	Push-pull Scale	Imada	PS-30	30kg at 0.25kg	212010	OK
GI	018	Spring Balance	Ohba		200N		OK
EV	004	Standard Test Finger Set		P-10.08			OK
EV	005	Standard Test Finger Set		P-10.09			OK

*Qu*

*U/M*

CODE	S/N	EQUIPMENT/MACHINERY	MANUFACTURER	MODEL	DESCRIPTION	S/N	CONDITION
GE	001	Temperature / Humidity Chamber	Tabai	PR-3ST		13001274	OK
GE	003	Temperature Chamber	Tabai	PH-100		211001835	OK
GE	007	Temperature Chamber (for Ball Pressure)	Toyo Seiki	FC-410		030064	OK
EV	010	Test Probe		P-10.02			OK
EV	006	Test Probe		P-10.06			OK
EV	007	Test Probe		P-10.11			OK
EV	008	Test Probe		P-10.12			OK
EV	009	Test Probe		P-10.15			OK
EV	011	Test Probe		P-10.16			OK
EV	012	Test Probe		P-10.17			OK
EV	013	Test Probe		P-10.18			OK
EI	001	Thermal Recorder	Yokogawa	uR1800	24-point		OK
GI	015	Torque Driver Set	Tohnichi	1.5LTDH			OK
GI	017	Torque Driver Set	Tohnichi	26LTDH-N			OK
GI	016	Torque Driver Set	Tohnichi	6LTDH-N			OK
EE	027	Tumbling Barrel	PTL	F06.15		9406185.1	OK
GI	036	Vernier Caliper	Mitutoyo	500-151		0006650	OK
GI	037	Vernier Caliper	Mitutoyo	500-151		0006659	OK
GI	001	Vernier Caliper	Mitutoyo	500-151		0006655	OK
GI	035	Vernier Caliper	Mitutoyo	500-151		0006657	OK
ME	005	Vicat Tester	Yasuda	148-HDPC-3		9253	Note 4

Note 1 Arc Tracking Test Apparatus (Hitachi, Model HAT-500-1)

No spare the needle drops, Needs more platinum electrodes at least 2 pairs.

Note 2 Glow Wire Test Apparatus (Hitachi, Model HAT-214)

No spare the special thermocouple, Needs more the thermocouples at least 5 pices.

Note 3 Needle Flame Test Apparatus (PTL, Model T-21.28)

Butane gas cylinder adaptor does not accept other brands of butane cylinders.

Supplied gas cylinder is not available locally.

Note 4 Vicat Tester (Eased, Model 148-HDPC-3)

Broken due to fuse cutoff (No spare fuses when delivered).

Reason: possibly due to voltage fluctuation.

Needs the spare fuses at least 10 and automatic voltage regulator for voltage fluctuation.

**Countermeasures for the Problem with the  
Existing Equipment in BPSTC by the Philippine Side**

**COUNTERMEASURES**

- 1 Development of spareparts and inventory database for all equipment and ensure that BPSTC has appropriate number of stocks for these parts.  
If parts are not available for stocking, list of local suppliers and distributors shall be made for easy ordering and procurement.
- 2 Increase the frequency of preventive maintenance to prolong the life of the spareparts and other consumable items.
- 3 Establish procedures to examine equipment properties prior to operation and establish safety measures e.g. voltage fluctuation, humidity/temperature control, dust. etc.



## Annex 19

## Local Cost for the Project

(Units :in Pesos)

Year	1998	1999	2000	2001	2002
BUDGET ITEM					
PERSONNEL EXPENSES	2,319,010	2,319,010	2,319,010	2,319,010	2,319,010
MAINTENANCE AND OPERATING EXPENSES	7,030,000	7,733,000	8,506,300	9,356,930	10,292,623
BUILDING	21,450,000	30,000,000	-	-	-
BUILDING FURNITURE	-	5,000,000	-	-	-
EQUIPMENT	-	1,000,000	1,500,000	1,000,000	1,000,000
TOTAL	30,799,010	46,052,010	12,325,310	12,675,940	13,611,633

Note : This budget covers the operation of mechanical and chemical testing laboratories as well.



## Annex 20 The Function and Composition of Joint Coordinating Committee

### 1 Functions

The joint coordinating committee will be held at least once a year and whenever necessity arises.

Its functions are as follows:

- (1) To settle on the Annual Work Plan of Operation (AWPO) of the Project in line with the Tentative Schedule of Schedule of Implementation, Technical Cooperation Program (TCP) and Plan of Operation formulated under the framework of the Record of Discussions;
- (2) To coordinate necessary actions to be taken by both sides;
- (3) To review the overall progress of the TCP and PO as well as well as achievement of the AWPO;
- (4) To exchange views on major issues arising from or in connection with the TCP and PO.

### 2 Composition

#### (1) Chairperson

Director, BPS

#### (2) Co-chairperson

Chief Advisor

#### (3) Committee Members

(Philippine side)

a Representative(s), National Economic and Development Agency (NEDA)

b Representative(s), DTI

c Representative(s), BPS

d Representative(s), MIRDC

d Other personnel concerned with the Project decided by the Philippine side, if necessary

(Japanese side)

a Coordinator

b Japanese Experts designated by the Chief Advisor

d Representative(s) of the JICA Office in the Republic of the Philippines

e Other personnel concerned to be decided and dispatched by JICA, if necessary

Note :

Official(s) of the Embassy of Japan in the Republic the Philippines may attend the Committee as observer(s).



## Annex 21 Five Basic Evaluation Components

### 1 Five Basic Evaluation Components

The five (5) basic evaluation components defined by JICA as mentioned below are in line with those used for the evaluation works by DAC and other international assistance organization. Introduction of these components has enabled a consistent, well-balanced evaluation, which minimizes evaluator bias. Further, it allows us to share the results, knowledge and lessons with other aid organizations, since we are using common components and can discuss with them from the same viewpoints.

#### (1) Efficiency

Evaluate the method, procedure, term and cost of the project with a view to productivity.

#### (2) Effectiveness

Evaluate the results in comparison with the goals (or revised ones) defined at the initial or intermediate stage, and evaluate the attributes (factors and conditions) of the results.

#### (3) Impact

Evaluate the positive and negative effects of the project, extent of the effect and beneficiaries.

#### (4) Relevance

Preliminary evaluate whether the needs in the country have been correctly identified, and whether the design is consistent with the national and/or master plan.

#### (5) Sustainability

Evaluate the autonomy and sustainability of the project after the termination of cooperation, from the perspectives of operation, management, economy, finance and technology.

### 2 Relation between Five Basic Components and PDM

The following five (5) components are used for the evaluation and a selection of a project.

#### (1) Efficiency

#### (2) Effectiveness

#### (3) Impact

#### (4) Relevance

#### (5) Sustainability

These components are directly connected to the elements of PDM as shown in the Figure in the following page.

The component "Efficiency" is a measure to qualitatively and quantitatively compare all resource (input) to the results (output)





of the project in order to evaluate the economic efficiency of conversion from input to output.

The parameter "Effectiveness" is a measure to evaluate whether the purpose has been achieved or not, or to evaluate how likely it is to be achieved. In other words, it is to evaluate how much the outputs contributed to the achievement of the purpose, or to evaluate whether or not the characteristics of the outputs were as expected.

The parameter "Impact" is a foreseeable or unforeseeable, and a favorable or adverse effect of the project upon society. To evaluate impact, both the goal and project purpose should be referred to in the beginning of the evaluation. Evaluation with this component could require comprehensive surveys in many cases. The parameter "Relevance" is to comprehensively evaluate whether or not the project meets the overall goals, politics of both the donor and recipient, local needs and given priority levels, in order to decide whether the project should be continued, reformulated or terminated.

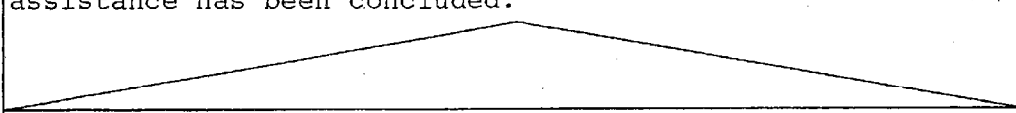

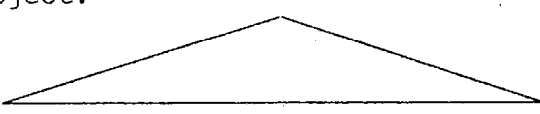
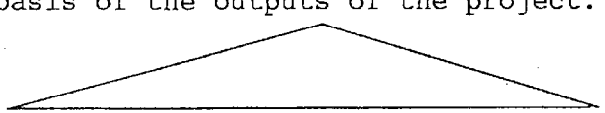
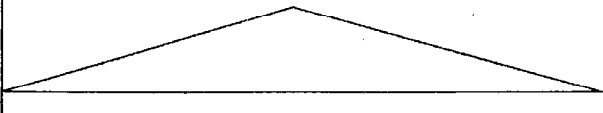
The component "Sustainability" is to comprehensively evaluate how long the favorable effect as a result of the project can continue after the project has been terminated. Evaluation with this component is required to decide how much the local resources should continue to be used for the project, and to evaluate how much the country receiving the assistance has been considering the project important. According to OECD (1989), "Sustainability" is a component to be used for the final test of the success of a development project.

All five components are essential for any of the projects or programs. The five components give necessary information to the decision maker so that he/she can decide how to approach the next step. Since each of the five components build on the elements of the intervention strategy, they also lay foundation for standardization in monitoring and information handling within and among organizations and agencies.

In practice, each of the five parameters should also contain project-specific information.



## Five Components vs Goal Hierarchy

E v a l u a t i o n C o m p o n e n s	<p><b>Sustainability:</b> Evaluate the extent to which the positive effects as a result of the project will still continue after external assistance has been concluded.</p> 
	<p><b>Relevance:</b> Evaluate the degree to which the project can still be justified in relation to the national and regional priority levels given to the theme.</p> 
	<p><b>Impact:</b> Foreseeable or unforeseeable, and favourable or adverse effect of the project upon the target groups and persons possibly affected by the project.</p> 
	<p><b>Effectiveness:</b> Evaluate the extent to which the purpose has been achieved or not, and whether the project purpose can be expected to happen on the basis of the outputs of the project.</p> 
	<p><b>Efficiency:</b> Evaluate how the results stand in relation to the efforts and resources, how economically the resources were converted to the outputs, and whether the same results could have been achieved by other better methods.</p> 

Inputs	Outputs	Project Purpose	Overall Goal
--------	---------	-----------------	--------------

Goal Hierarchy




## Annex 22 Tentative Schedule of Implementation (TSI)

Calendar Year	1997				1998				1999				2000				2001				2002					
Japanese Fiscal Year	1997				1998				1999				2000				2001				2002					
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
Term of Technical Cooperation																										
The Japanese side																										
I Dispatch of Mission																										
(1)Preliminary Study		+																								
(2)Supplemental Study					-																					
(3)Implementation Study						+																				
(4)Consultation									-										-							
(5)Advisory														-												
(6)Evaluation																								+		
II Dispatch of Long-term Experts																										
(1)Chief Advisor																										
(2)Coordinator																										
(3)Electrical and Electronic Appliances Testing																										
III Dispatch of Short-term Experts																										
IV Training of C/P in Japan																										
V Provision of Machinery and Equipment																										
The Philippine side																										
I Building and Facilities (Renovation)																										
II Machinery and Equipment																										
III Allocation of C/P and Administrative Staff																										
IV Budgetary Allocation																										

Note 1 This schedule is subject to change with the progress of the Project.

2 The Consultation Team may not necessarily be dispatched.




## Annex 23 Sample of Record of Discussions (R/D)

RECORD OF DISCUSSIONS  
BETWEEN JAPANESE IMPLEMENTATION STUDY TEAM  
AND AUTHORITIES CONCERNED OF THE GOVERNMENT  
OF THE REPUBLIC OF THE PHILIPPINES  
ON JAPANESE TECHNICAL COOPERATION  
FOR THE PROJECT ON ELECTRICAL AND ELECTRONIC APPLIANCES TESTING

The Japanese Implementation Study Team organized by the Japan International Cooperation Agency and headed by Mr. \_\_\_\_\_ (hereinafter referred to as "the Team"), visited the Republic of the Philippines from \_\_\_\_\_ to \_\_\_\_\_ 1998 for the purpose of working out the details of the technical cooperation program concerning the Project on Electrical and Electronic Appliances Testing in the Republic of the Philippines.

During its stay in the Republic of the Philippines, the Team exchanged views and had a series of discussions with the Philippine authorities concerned with respect to desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Philippine authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Manila, 1998

---

Leader  
Implementation Study Team  
Japan International Cooperation Agency  
Japan



---

Director  
Bureau of Product Development  
Department of Trade and Industry  
Republic of the Philippines



ATTACHED DOCUMENT

I COOPERATION BETWEEN BOTH GOVERNMENTS

- 1 The Government of the Republic of the Philippines will implement the Project on Electrical and Electronic Appliances Testing (hereinafter referred to as "the Project") in cooperation with the Government of Japan.
- 2 The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

In accordance with the laws and regulations in force in Japan, the Government of Japan will take, at its own expense, the following measures through the Japan International Cooperation Agency (hereinafter referred to as "JICA") according to the normal procedures under the technical cooperation scheme of Japan of the Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific (hereinafter referred to as "the Colombo Plan").

1 DISPATCH OF JAPANESE EXPERTS

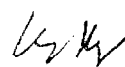
The Government of Japan will provide the services of the Japanese experts as listed in Annex II.

2 PROVISION OF MACHINERY AND EQUIPMENT

The Government of Japan will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in Annex III. The Equipment will become the property of the Government of the Republic of the Philippines upon being delivered C.I.F. to the Philippine authorities concerned at the ports and/or airports of disembarkation.

3 TRAINING OF PHILIPPINE PERSONNEL IN JAPAN

The Government of Japan will receive the Philippine personnel connected with the Project for technical training in Japan.



### III MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

- 1 The Government of the Republic of the Philippines will take necessary measures to ensure self-reliant operation of the Project during and after the period of Japanese technical cooperation, through the full and active involvement of all related authorities, beneficiary groups and institutions in the Project.
- 2 The Government of the Republic of the Philippines will ensure that the technologies and knowledge acquired by the Philippine nationals as a result of Japanese technical cooperation will contribute to the economic and social development of the Republic of the Philippines.
- 3 The Government of the Republic of the Philippines will grant in the Republic of the Philippines privileges, exemptions and benefits to the Japanese experts referred to in II-1 above and their families, which are no less favorable than those accorded to experts of third countries working in the Republic of the Philippines under the Colombo Plan Technical Cooperation Scheme.
- 4 The Government of the Republic of the Philippines will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.
- 5 The Government of the Republic of the Philippines will take necessary measures to ensure that the knowledge and experience acquired by the Philippine personnel through technical training in Japan will be utilized effectively in the implementation of the Project.
- 6 In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to provide at its own expense for the Project:
  - (1) Services of the Philippine counterpart personnel and administrative personnel as listed in Annex IV;
  - (2) Land, buildings and facilities as listed in Annex V;



- (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above;
  - (4) Means of transport and travel allowances for the Japanese experts for official travel within the Republic of the Philippines ; and
  - (5) Suitably furnished accommodations for the Japanese experts and their families.
- 7 In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to meet:
- (1) Expenses necessary for transportation within the Republic of the Philippines of the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
  - (2) Customs duties, internal taxes and any other charges imposed in the Republic of the Philippines on the Equipment referred to in II-2 above; and
  - (3) Running expenses necessary for the implementation of the Project.

#### IV ADMINISTRATION OF THE PROJECT

- 1 Director of Bureau of Product Department (hereinafter referred to as "BPS"), Department of Trade and Industry (hereinafter referred to as "DTI"), as the Project Director, will bear overall responsibility for the administration and implementation of the Project.
- 2 Head of BPS Testing Center, BPS, DTI, as the Project Manager, will be responsible for the managerial and technical matters of the Project.
- 3 The Japanese Chief Advisor will provide necessary recommendations and advice to the Project Director and the Project Manager on any matters pertaining to the implementation of the Project.
- 4 The Japanese experts will provide necessary technical guidance and advice to the Philippine

counterpart personnel on technical matters pertaining to the implementation of the Project.

- 5 For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established whose functions and composition are described in Annex VI.

## V JOINT EVALUATION

Evaluation of the Project will be conducted jointly by the two Governments through JICA and the Philippine authorities concerned at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

## VI CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of the Philippines shall bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of the Philippines except for those arising from the willful misconduct or gross negligence of the Japanese experts.

## VII MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with, this Attached Document.

## VIII MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of the Republic of the Philippines, the Government of the Republic of the Philippines will take appropriate measures to make the Project widely known to the people of the Republic of the Philippines.





IX TERM OF COOPERATION

The duration of technical cooperation for the Project under this Attached Document will be four (4) years from



LIST OF ANNEX

- ANNEX I MASTER PLAN
- ANNEX II LIST OF JAPANESE EXPERTS
- ANNEX III LIST OF MACHINERY AND EQUIPMENT
- ANNEX IV LIST OF PHILIPPINE COUNTERPART AND ADMINISTRATIVE PERSONNEL
- ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES
- ANNEX VI JOINT COORDINATING COMMITTEE



## Annex 24

### List of Attendees

#### The Japanese side

##### 1. Japanese Supplementary Study Team

Mr. Makoto Yamashita	Leader
Mr. Tadato Onitsuka	Member (Technical Cooperation Program)
Mr. Masaru Yokoo	Member (Training Planning)
Mr. Takashi Hatsumi	Member (Electrical Appliances Testing)
Mr. Wataru Takase	Member (Electronic Appliances Testing)
Mr. Susumu Katsumata	Member (Cooperation Planning)

##### 2. JICA Philippine Office

Mr. Hajime Nakazawa	Assistant Resident Representative
---------------------	-----------------------------------

#### The Philippine side

##### 1. Department of Trade and Industry

Ms. Zenaida C. Maglaya	Assistant Secretary
------------------------	---------------------

##### 2. Bureau of Product Standards (BPS)

Mr. Jesus L. Motoomull	Director
Ms. Cirila S. Botor	Assistant Director
Mr. Gerardo P. Panopio	Head, BPS Testing Center (BPSTC)
Ms. Perla F. Baje	Head, Laboratory Accreditation
Mr. Jerry T. Sayson	Senior Trade and Industry Specialist, BPSTC
Mr. Ramil R. Jurado	Senior Trade and Industry Specialist, BPSTC

