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1. 要請書

Sector Code : 4-2-2	Day 14 <sup>th</sup> Month 12 Year, 2005
Applicant: <input checked="" type="checkbox"/> Federal Ministry of .....	
<input type="checkbox"/> Province ( <input type="checkbox"/> Balochistan <input type="checkbox"/> NWFP <input type="checkbox"/> Punjab <input type="checkbox"/> Sind )	
Department of .....	
Implementing Agency: Pakistan EPA	
Address: 44-E, Office Tower, Blue Area, Islamabad.	
Contact Person: Mr. Asif S. Khan	
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**APPLICATION FORM  
FOR  
JAPAN'S "TECHNICAL COOPERATION", "DEVELOPMENT STUDY"  
AND "GRANT AID"**

\* "Grant Aid General", "Grant Aid Fisheries" and "Grant Assistance for under Privileged Farmers"

< INSTRUCTIONS >
<input checked="" type="checkbox"/> Please fill in this application form concisely.
<input checked="" type="checkbox"/> Only required documents (Approved CCP/PC-1/PC-2, Maps, Organization Chart and so on) will be appreciated to be attached to this application form.

**1. Project Title**

EMS-SP

**2. Procedural status in Pakistan Government**

Please check box.

- Approved (  Concept Clearance Paper  PC-1  PC-II )  
(  DDWP  CDWP  ECNEC )
- Under preparation of CCP
- Part of the approved project  
(  listed in PSDP/ADP or  not listed in PSDP/ADP )  
(Project name: )
- Part of the 5 / 10 Year Plan or Medium Term Development Framework
- Small and no need CCP/PC-I/PC-II process.

**3. Site location**

Please attach a rough map with this form. The map should be at a scale that clearly shows the study/project site. Mark the site.

N.A

#### 4. Background of the Project

##### (1) Current condition of the sector

Serious environmental and public health hazards exist due to the unplanned development activities (industrial, urban, agricultural, etc.) in Pakistan. The deterioration of public health and environmental conditions demands that Pak-EPA promptly mobilizes its resources and staff to protect the environment. The project will serve to lay the foundation for building capacity of the monitoring laboratories of Pak-EPA and Provincial EPAs in order to enhance regulatory compliance, and environmental management and protection. In such aspect, this project as a network will develop the needed specialized technical and monitoring capacities that Pak-EPA need to support to implement the Pakistan Environmental Protection Act, 1997.

##### (2) Issues and problems to be solved

- Absence of Ambient air and water quality standards
- Absence of scientific and reliable water/air quality data

Absence of technical capacities needed to collect, interpret, generate and use data for Environment specific policy making, action oriented planning, legislation and improving the quality of air and water

- Lack and/or absence of qualified and trained professionals who could operate, manage and effectively run the environment monitoring system
- Unplanned and sporadic growth of cities and industries

##### (3) Related Government's policy

(National/Provincial Development Plan & Sector Development Plan)

Clean air is one of the priority areas of NEAP, there is a need to develop Ambient Air Quality Standards, which need background release data and also identification of point and non-point sources. This needs EMS network backed by tech. expertise to interpret the data so generate.

##### (4) Other relevant projects or activities for solving said issues and problems

United Nation Development Program (UNDP) – Fuel Efficiency in Road Transport Sector (FERTS) Project

The Fuel Efficiency in Road Transport Sector (FERTS) Project aims to reduce at source emissions of greenhouse gases (GHGs) and other

pollutants by improving fuel efficiency of road transport vehicles in Pakistan. It provides benefit at various levels. The vehicle owners benefit from fuel savings and lower fuel bills. The workshop owners benefit from the increased business in vehicle maintenance. The country benefits from reduced fuel imports. The Global environmental benefits are in the form of reduced GHG emissions

Pakistan Environment Program (PEP) – Vehicle Emission Testing (VETS) unit

The Pakistan Environment Programme (PEP), initiated in July 1994, has supported the twin purposes of (a) capacity building of the partner organisations themselves as the key institutions for sustaining the environment agenda in Pakistan, and (b) capacity building for the environment in the country at large, through activities of the PEP partners. Under PEP-Component, Pakistan Environmental Protection Agency being one of the partners in the programme has introduced VETS Unit in Islamabad. This unit is regularly checking smoke emission from vehicles and advising the owners of vehicles about status of their engine. This activity would ultimately lead to educating the community for taking measures for tuning up of their vehicles thus reducing emissions and also saving on fuel cost.

Government of Punjab establishment of Green fund

The Government of Punjab has embarked upon a 3-year programme. The Programme has been launched in collaboration with 4-stroke CNG Rickshaw cab Manufacturers and the Bank of Punjab. Under this programme a Green Fund has been established to provide loans to individuals for purchasing 4-stroke CNG Rickshaw Cabs on 25% - 75% equity ration. The programme has been approved at a cost of Rs. 1143.600 million. Under this programme it is expected that with the introduction of 4- Strokes CNG Rickshaws, Air Pollution could be positively improved.

Government of North West Frontier Province (NWFP) – VETS

The NWFP-Environmental Protection Agency is operating VETS Units in their area of jurisdiction. The basic purpose of this activity

is to take appropriate action against vehicles which are emitting excessive smoke thus causing Air Pollution. This activity has started paying dividend as violators are being penalized and are therefore conscious for taking appropriate measures to fix the defect of their vehicles engine.

## 5. Outline of the Project

### (1) Overall Goal / Longterm-term objective

Better environment and improved public health with safe water, clean air, adequate control measures and continuous environmental monitoring

### (2) Project Purpose / Short-term objective

To establish Ambient Air and Water quality standards through an effective monitoring system managed by EPAs in major cities of Pakistan

### (3) Output

1. Established Ambient air and water quality standards and analytical method of emission standards.
2. Scientific and reliable water/air quality data is collected and analyzed on regular basis
3. Enhanced capacities of EPA staff needed for Environment specific policy making, action oriented planning, legislation etc
4. Enhanced and effective coordination, communication and networking among central and provincial EPAs and with other line departments/institutions/industries

### (4) Project Activities

If this project is "Development Study", please fill in the "Scope of the Study" and "Study schedule", here.

#### Activities:

- 1.1 Producing position papers for development of Quality Standards.
- 1.2 Collecting data of relationship between ambient concentration and health effect and vegetation and forest damage.
- 1.3 Analyzing monitoring data and environmental load analysis grasping the correlation of environmental quality and emission in

water and air pollutants.

- 2.1 Training in theory and on the job for making monitoring plans, samplings, analysis, interpretation, evaluation, data filing (including statistical analysis) and reporting.
- 2.2 Formulate the environmental and sources monitoring plan specifying parameters and monitoring sites in respective laboratory.
- 2.3 Provide necessary assistance and guidance to integrate the existing environmental and sources monitoring guideline into a standard for all laboratories.
- 3.1 In order to make adequate political decision, establishing database of environmental and source information, this is also useful for improve the capacities of EPA staff.
- 3.2 Conduct pollution source inventory surveys such as stationary and mobile sources.
- 3.3 Send the monitoring records from provincial EPAs to the Decision Supporting Unit in the Pak EPA.
- 3.4 Design the monitoring record formats for laboratories and for the Decision Supporting Unit in EPAs.
- 3.5 Provide necessary assistance and guidance to prepare Directorates' budget plan for regular monitoring.
- 4.1 Public announcement of environmental data which are obtained by routine monitoring .
- 4.2 Formulate the laboratory operation and maintenance manual (o/m) .
- 4.3 Development models of getting relationship between sources and ambient concentration, those are receptor oriented and source oriented method.
- 4.4 Regular meeting of government and industries about improvement environmental condition.
- 4.5 Forming regular cooperation meeting among Pak-EPA and provincial EPAs, and exchanging information about environmental policy and related data.

(5) Beneficiaries

Pleas identify the beneficiaries and population for which positive change are intended directly and indirectly by implementing the project, and gender disaggregated data, if available.

Federal and Provincial EPAs, R&D institutes, General Public

(6) Related Activities (Other donors and NGOs)

N.A

(7) Input from the Pakistan side (Arrangement done by Pakistani side as its responsibility)

- 1) Counterpart personnel and support staff attached to the project (Number and Position)

A total number of 121 officials would be hired for EMS Project

- 2) Available office space, vehicles, equipment and etc.

Office space and office equipment for JICA expert to be provided

- 3) Running expenses (allocation in PSDP or ADP)

Running expenses and domestic transportation vehicle to be provided

- 4) Available data, information, documents, maps, etc

To be provided

- 5) (If this project is "Grant Aid") Cost of equipment purchase or facility



construction with its breakdown

-Not applicable-

( 8 ) Input from the Japanese side ( Request to Japanese side from Pakistani side)

1) Experts (Number, Field and qualification)

Please check box.

NOT NECESSARY

<input checked="" type="checkbox"/> YES	Field	Number	Qualification
	Water Quality Analysis	1	Experience over 10 Years
	Air Quality Analysis & monitoring	1	// //
	Data Management	1	// //

2) Training, seminars and workshops (Expected participants and numbers)

Please check box

NOT NECESSARY

YES, in Pakistan      Seminars, workshops, hands on trainings

Participants	Number
Air Quality Analysis	25
Water Quality Analysis	25

YES, in Japan or third country

Participants	Number
Environmental Policy	1
Environmental Management	5
Laboratory Management	5

3) Equipment

Please check box

NOT NECESSARY

YES

①Site address to be installed

Pak-EPA

**②Function of the equipment**

Analyzing heavy metals components of particulate and soil.  
(Because the concentration of suspended particulate matter (SPM) is extraordinary higher among the five principal air pollutants(NO<sub>x</sub>,SO<sub>2</sub>,CO,O<sub>3</sub>,SPM) in main cities of Pakistan)

**③Name of main equipment**

Fluorescence X-ray Analyzer

**④Cost of purchase (Cost breakdown)**

Fluorescence X-ray Analyzer = 8.0 million Rs.

**⑤Specifications, the quantity, and unit price (if available)**

Fluorescence X-ray Analyzer

**⑥ Invoice (if available)**

Please attach to this application form.

**⑦ How to operate and maintain the facility, technical level of the responsible organization and the staff.**

- 1) For maintenance, electronic engineers are going to be hired in EMS Project.
- 2) For analysis/usage Scientists are also going to recruit in EMS Project

**⑧Amount of the equipment**

Total Amount (including the cost of Pakistan side)

Rs. 8,000,000

Request Amount (Please check box)

- Less than US\$ 5,000,000
- Between US\$ 5,000,000 and US\$ 10,000,000
- More than US\$ 10,000,000
- Rs. \_\_\_\_\_

4) Facilities (Complete or partial building construction)

Please check box.

NOT NECESSARY

YES

① Site address

② Rationale for the selected sites

If there are some candidate sites, please specify the priority of them.

③ The number and the size of the facility

④ Cost of construction (Cost breakdown)

⑤ Layout plan (if available)

⑥ Specifications of construction materials (if available)

⑦ How to operate and maintain the facility, technical level of the responsible organization and the staff

⑧ Amount of the facilities

Total Amount (including the cost of Pakistan side)

Rs. \_\_\_\_\_

Request Amount (Please check box)

- Less than US\$ 5,000,000  
 Between US\$ 5,000,000 and US\$ 10,000,000  
 More than US\$ 10,000,000  
 Rs. \_\_\_\_\_

(9) (If this project is "Development Study") The project's priority in the National Development Plan

(10) (If this project is "Development Study") Expected funding resource and/or assistance (including external organization) for implementation of plans proposed by the Development Study

6. Implementation Schedule

Month 06 Year 2006 ~ Month 06 Year 2009

7. Implementing Agency

(1) Attach an organization chart

(2) Annual budget

(3) Staffing (on a category basis)

#### 8. Security Conditions

#### 9. Gender Consideration

#### 10 Environment and Social Considerations

Please fill in the attached Screening Format

#### 11. Undertakings for the Study

The Government of Pakistan assures that the matters referred to in this form will be ensured for the smooth conduct of the Development Study and the study for the Grant Aid Project by the Japanese Study Team.

(1) To facilitate the smooth conduct of the Study, the Government of Pakistan shall take necessary measures:

- 1) To permit the members of the Team to enter, leave and sojourn in Pakistan for the duration of their assignments therein in connection with their assignment therein, and exempt them from foreign registration requirements and consular fees;
- 2) To exempt the member of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into of Pakistan for the implementation of the Study;
- 3) To exempt the member of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the team for their services in connection with the implementation of the Study,
- 4) To provide necessary facilities to the Study Team for remittance as well as utilization of the funds introduced in (the recipient country) from Japan in connection with the implementation of the Study,

- (2) The Government of Pakistan shall bear claims, if any arise against the member(s) of the Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the team.
- (3) The Implementing Agency shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
- (4) The Implementing Agency shall, at its own expenses, provide the Team with the following, in cooperation with other organizations concerned.
- 1) Security-related information on as well as measures to ensure the safety of the team;
  - 2) Information on as well as support in obtaining medical service;
  - 3) Available data and information related to the Study;
  - 4) Counterpart personnel;
  - 5) Suitable office space with necessary office equipment and furniture;
  - 6) Credentials or identification cards; and
  - 7) Vehicles with drivers
- (5) The Implementing Agency will, as the executing agency of the project, take responsibilities that may arise from the products of the Study. \*In the case that Detail Design Study is requested.

### 13. Others

**MINUTES OF MEETING  
BETWEEN THE JAPANESE PREPARATORY STUDY TEAM AND  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE ISLAMIC REPUBLIC OF PAKISTAN  
ON TECHNICAL COOPERATION FOR  
ESTABLISHMENT OF ENVIRONMENTAL MONITORING SYSTEM**

The Japanese Preparatory Study Team (hereinafter referred to as “the Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) and headed by Mr. Eiji Iwasaki, visited the Islamic Republic of Pakistan (hereinafter referred to as “Pakistan”) on February 11, 2006. The Team is scheduled to stay until March 11, 2006, for the purpose of formulation of technical cooperation for Establishment of Environmental Monitoring System in the Islamic Republic of Pakistan (hereinafter referred to as “the Project”).

The Team exchanged views and had a series of discussions with the authorities concerned of the Government of Pakistan (hereinafter referred to as “the Pakistani Authorities”). As a result of the discussions, and in accordance with the provisions of the Agreement on Technical Cooperation between the Government of Japan and the Government of the Islamic Republic of Pakistan, signed in Islamabad on April 30, 2005 (hereinafter referred to as “the Agreement”), and the exchange of Note Verbale between the Embassy of Japan in Pakistan and the Ministry of Economic Affairs and Statistics (Economic Affairs Division) of Pakistan on June 15, 2005, both, the Team and the Pakistani authorities agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Islamabad, February 23, 2006

岩崎 英二

\_\_\_\_\_  
Eiji Iwasaki  
Leader  
Japanese Preparatory Study Team  
Japan International Cooperation Agency  
Japan

Khalid Latif Chaudhary

\_\_\_\_\_  
Khalid Latif Chaudhary  
Secretary  
Ministry of Environment  
Islamic Republic of Pakistan

Altef Azid Khan

\_\_\_\_\_  
Altef Azid Khan  
Joint Secretary-ADB/Japan  
Economic Affairs Division  
Ministry of Economic Affairs and Statistics  
Islamic Republic of Pakistan

Asif Shuja Khan

\_\_\_\_\_  
Asif Shuja Khan  
Director General  
Pakistan Environment Protection Agency  
Islamic Republic of Pakistan

## ATTACHED DOCUMENT

### 1. Cooperation between JICA and the Government of Pakistan

1-1 The Government of Pakistan will implement the Project in cooperation with JICA.

1-2 The title of the Project shall be referred to as "Technical Cooperation for Establishment of Environmental Monitoring System".

### 2. Responsible Agency and Implementing Agencies

#### 2-1 Responsible Agency

Pakistan Environmental Protection Agency (hereinafter referred to as "Pak-EPA" or "Federal EPA") shall be the Responsible Agency of the Project.

#### 2-2 Implementing Agencies

The following organizations shall be the Implementing Agencies of the Project;

- (a) Pak-EPA
- (b) Environmental Protection Department, Punjab  
(hereinafter referred to as "Punjab-EPD")
- (c) Environmental Protection Agency, Sindh  
(hereinafter referred to as "Sindh-EPA")
- (d) Environmental Protection Agency, NWFP  
(hereinafter referred to as "NWFP-EPA")
- (e) Environmental Protection Agency, Balochistan  
(hereinafter referred to as "Balochistan-EPA")

((b), (c), (d) and (e) are hereinafter referred to as 'Provincial EPAs')



### 3. Administration of the Project

#### 3-1 National Project Director

Director General, Pak-EPA, as the National Project Director, will bear overall responsibility for administration, coordination and implementation of the Project.

#### 3-2 Sub Project Director

Director Generals/Director of Provincial EPAs will work as Sub Project Directors and will be responsible for managerial and technical matters of the Project.

#### 3-3 Expert Team dispatched by JICA

The leader of the Expert Team will provide necessary recommendations and technical advice to the Project Director on any matters pertaining to the implementation of the Project. The expert(s) will give necessary guidance and advice to Pakistani counterpart personnel on technical matters pertaining to the implementation of the Project.

#### 3-4 Project Steering Committee

The Pakistani Authorities shall establish the Project Steering Committee (hereinafter referred to as "PSC") for the Project, for coordination, guidance and supervision for smooth implementation and operation of the Project. The PSC shall meet at least once a year.

PSC consists of the following members.

<Chairman>

- Secretary, Ministry of Environment

<Members>

- Joint Secretary (Development), Ministry of Environment

- Director General, Pak-EPA

- Provincial Secretaries dealing with the subject of environment  
(Punjab, Sindh, NWFP, Balochistan)

- Representative, Economic Affairs Division, Ministry of Economic Affairs and Statistics

<Observer>

- JICA Pakistan Office
- Leader of the Expert Team dispatched by JICA

### 3-5 Joint Coordinating Committee

The Joint Coordinating Committee (hereinafter referred to as "JCC") shall be established for the effective and successful implementation of technical cooperation for the Project. The JCC shall meet at least once a year. The main functions of JCC shall be as follows;

- (1) To formulate the annual operational work plan of the Project based on the tentative schedule of implementation within the framework of the Record of Discussions (R/D)
- (2) To review the overall progress and achievements of the Project
- (3) To examine major issues arising from or in connection with the Project
- (4) To work out the modification of activities depending on the necessity

JCC will consist of the following members;

<Chairman>

- Director General, Pak-EPA

<Committee Members>

Pakistani side:

- Sub Project Directors

Japanese side:

- Expert Team to be dispatched by JICA
- Representatives of JICA Pakistan Office
- Other personnel concerned to be decided and/or dispatched by JICA, if necessary

<Observer>

- Embassy of Japan in Pakistan

### 4. Technical Trainings of the Project

The Pakistani Authorities and the Team understood that the scope of the technical trainings to be conducted relevant to the Project as described below;

#### 4-1 Basic Training Programs by Pak-EPA

Pak-EPA explained the draft of their basic training program to the Team. Pak-EPA promised that they will submit their final version of the basic training program to JICA Pakistan Office by the end of April 2006 for elaborating project activities to be included in the Project Design Matrix (PDM) of the Project. Japanese experience may be introduced upon request in the course of the Basic Training Programs by Pak-EPA.

#### 4-2 'Soft Component' of the Grant Aid Project

Technical trainings on initial operation and maintenance of the equipment to be provided in the grant aid is defined as the 'soft component' in the "*Basic Design Study Report on the Project for the Establishment of Environmental Monitoring System in the Islamic Republic of Pakistan*" (issued in July 2005).

#### 4-3 Technical training of the Project

After the installation of the equipment under the grant aid project, technical trainings including on-the-job training, are to be conducted on environmental monitoring planning, analysis, and data management in the Project.

#### 4-4 Coordination of the training programs

The training programs have been drawn up based on the scheduled implementation of the grant aid project and is tentatively set as shown in the Attachment-1.

### 5. Tentative Scope of the Project



Both Pakistani Authorities and the Team agreed that the overall goal, the project purpose, and expected outputs of the Project would be as described in 5-1, 5-2 and 5-3 below. These items are to be reviewed in the Second Preparatory Study for the Project.

#### 5-1 Overall Goal

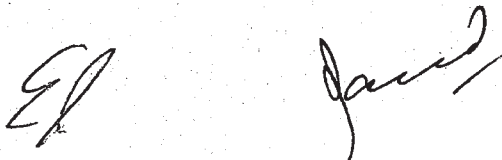
- (1) The Federal and Provincial EPAs' capacity of regular environmental monitoring and enforcement/enactment of environmental laws and regulations is enhanced.
- (2) The EPAs are strengthened with the technical know-how of empirical and economical countermeasures against environmental pollution
- (3) Environment awareness of citizens and industries are raised.
- (4) Researches and surveys on environmental pollution are facilitated.

#### 5-2 Project Purpose

The Federal and Provincial EPAs' capacity of environmental monitoring on air and water is enhanced.

#### 5-3 Expected Outputs

- (1) EPA staffs are capable of formulating environmental monitoring plans.
- (2) EPA staffs are capable of measuring all the parameters of National Environment Quality Standards (NEQS) based on uniform methodologies of sampling, measuring and analysis.
- (3) A system of Quality Assurance/Quality Control (QA/QC) is established in EPAs.
- (4) EPA staffs are capable of interpreting and evaluating monitoring data based on the



internationally recognized environmental standards.

(5) EPA staffs are capable of compiling monitoring data accumulated using a uniform format.

(6) EPA staffs are capable of providing the relevant stakeholders with the information on state of air and water quality.

(7) EPA staffs are capable of conducting trainings on environmental monitoring.

(8) EPA staffs are capable of proposing countermeasures against environmental pollutions, action plans and specific policies to the relevant stakeholders such as industries and government organizations.

#### **6. Project Design Matrix (PDM)**

The Project Design Matrix (PDM) for the Project will be discussed between the Pakistani Authorities and the Second Preparatory Study Team to be dispatched by JICA in Japanese Fiscal Year 2006 (from April 2006 to March 2007).

#### **7. Plan of Operation (PO)**

The Plan of Operation (PO) for the project period will be discussed between the Pakistani Authorities and the Second Preparatory Study Team to be dispatched by JICA in Japanese Fiscal Year 2006.

#### **8. Joint Evaluation**

Evaluation of the Project will be conducted jointly by the Pakistani Authorities and JICA, at the middle and during the last six months of the term of the Project in order to examine the level of achievement.



## **9. Term of the Project**

The date of commencement and the duration of the Project will be discussed between the Pakistani Authorities and the Second Preparatory Study Team to be dispatched by JICA in Japanese Fiscal Year 2006.

## **10. Schedule for Record of Discussions (R/D)**

### **10-1 Second Preparatory Study**

The Second Preparatory Study Team will be dispatched to Pakistan for further discussion in Japanese Fiscal Year 2006, after the confirmation of the followings;

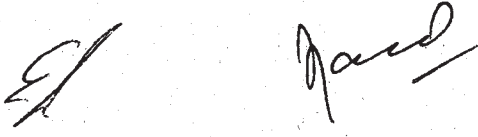
- (1) PSC is established by the end of April 2006
- (2) List of counterpart personnel is submitted to JICA Pakistan Office by the end April 2006

### **10-2 Record of Discussions (R/D)**

If the Project is found appropriately defined and officially approved by the JICA executive board based on the outcome of the Second Preparatory Study, the "Record of Discussions" (R/D) will be prepared for signing between the Pakistani Authorities and the JICA Pakistan Office.

## **11. Measures to be taken by the Government of Pakistan**

- (1) The Government of Pakistan will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.

Two handwritten signatures in black ink are present at the bottom left of the page. The first signature is on the left, and the second is on the right, both appearing to be in cursive or a similar fluid script.

- (2) The Government of Pakistan will ensure that the technologies and knowledge acquired by the Pakistani nationals as a result of Japanese technical cooperation will contribute to the economic and social development of Pakistan.
- (3) In accordance with the provisions of Article V of the Agreement, the Government of Pakistan will grant in Pakistan privileges, exemptions and benefits to the Japanese experts to be dispatched to the Project and their families.
- (4) In accordance with the provisions of Article VII of the Agreement, the Government of Pakistan will take the measures necessary to receive and use the equipment provided by JICA and equipment, machinery and materials carried in by the Japanese experts.
- (5) The Government of Pakistan will take necessary measures to ensure that the knowledge and experience acquired by the Pakistani personnel from training in Japan will be utilized effectively in the implementation of the Project.
- (6) In accordance with the provision of Article V 2 (b) of the Agreement, the Government of Pakistan will provide the services of Pakistani counterpart personnel and administrative personnel.
- (7) In accordance with the provisions of Article V 2 (a) of the Agreement, the Government of Pakistan will provide suitable office and other facilities necessary for the performance of the duties by the Japanese experts.
- (8) In accordance with the laws and regulations in force in Pakistan, the Government of Pakistan will take necessary measures to supply or replace at its own expense machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project.
- (9) In accordance with the laws and regulations in force in Pakistan, the Government of Pakistan will take necessary measures to meet the running expenses necessary for the implementation of the Project.

**12. Measures to be taken by JICA**

In accordance with the laws and regulations in force in Japan and the provisions of Article III of the Agreement, JICA, as the executing agency for technical cooperation by the Government of Japan, will take, at its own expense, the following measures according to the normal procedures of its technical cooperation scheme.

(1) Dispatch of Japanese Experts

JICA will provide the services of the Japanese experts in the area of water quality analysis and monitoring, air quality measurement and monitoring, and data management.

(2) Counterpart trainings in Japan

Counterpart trainings in Japan will be considered for the area of environmental policy, environmental management and laboratory management. The number of the personnel to be trained will be discussed in the course of the Project.

(3) Provision of Machinery and Equipment

The Government of Japan will provide machinery and equipment under the grant aid project. The Project will use to the maximum extent possible such machinery, equipment and other materials for efficient and effective technology transfer as envisaged in the Project Design Matrix (PDM) of the Project.

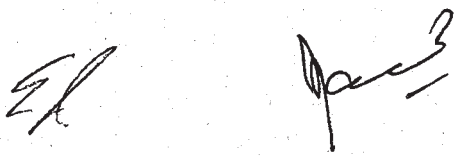
### 13. Others

#### 13-1 Recruiting of the new staff

Pak-EPA confirmed that 65 new staff would be initially employed by the end of April 2006, additionally 55 staff by the end of December 2006.

#### 13-2 National standards of ambient air and water quality

Though the establishment of national standards of ambient air and water quality is not considered as a part of the project outputs, the advice and/or comments as necessary may be provided by the Expert Team.





### 13-3 Relationship between emission sources and ambient concentration

The workshops, seminars and/or some training by Japanese short-term expert(s) introducing practical application of simulation models will be organized if necessary in the course of the Project.

### 13-4 Training programs to be implemented by Pakistani Government

Pak-EPA explained the draft of their basic training program to the Team. Pak-EPA promised that they will submit their final version of the basic training program to JICA Pakistan Office by the end of April 2006 for elaborating activities of the Project.

### 13-5 Budget allocation to the Project

(1) Under the PC-I (Planning Commission Proforma I) approved on December 7, 2004

Pak-EPA confirmed that the following resources provided in the PC-I should be made available to the Project;

#### 1) Technical Manpower Listed in PC-I

i)	Project Director	01
ii)	Co-project Director	01
iii)	Technical Officers	45
iv)	Technical Staff	70

Currently 65 new staff members are under recruitment and will be employed by the end of April 2006.

#### 2) Estimated Financial Resources in the PC-I

i)	Establishment Charges (Estimated)	Rs. 60.36 million
ii)	Operation and Maintenance cost	Rs. 18.30 million
iii)	Training cost	Rs. 17.143 million

(2) Post PC-I period

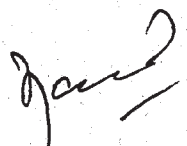
Pak-EPA confirmed that the Provincial EPAs after completion of the PC-I will take up the responsibility for providing additional financial resources for operating the monitoring equipment/system. In case the provincial EPAs under some circumstances deviate from their commitment, Pak-EPA would take responsibility and request/arrange the budget from the Federal Government for the purpose.

Pak-EPA explained that after completion of the development budget of PC-I, the local cost necessary for the operation of the Project to be borne by Pak-EPA and 4 Provincial EPAs, with submission of PC-IV (project completion report), would be covered by the regular budget starting from July 1, 2007 (the beginning of Pakistani Fiscal Year 2007).

#### 13-6 Training aids

Pak-EPA suggested that some training aids such as audio-visual equipment and other necessary items may be provided for effective and sustainable training. The details will be worked out in the Second Preparatory Study.

#### Attachment-1 Implementation schedule for trainings (tentative)



Implementation schedule for trainings (tentative)

Attachment-1

	April 2006	May 2006	Jun 2006	Jul 2006	Aug 2006	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2007	Feb 2007	Mar 2007
Pak EPA	<p>staff recruitment (65 persons)</p> <p>Basic training for newly hired staff</p>								<p>staff recruitment (55 persons)</p>			
Grant Aid Project									<p>Installation of Equipment</p>		<p>Soft Component</p>	
Technical Cooperation Project		<p>Second Preparatory Study</p>			<p>Signing R/D</p>							<p>Technical Cooperation Project</p> <p>* Starting approx. three months after the signing of R/D.</p>
			<p>Approval procedure @ JICA HQ</p>			<p>Selection of Expert Team @ JICA HQ</p>						

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