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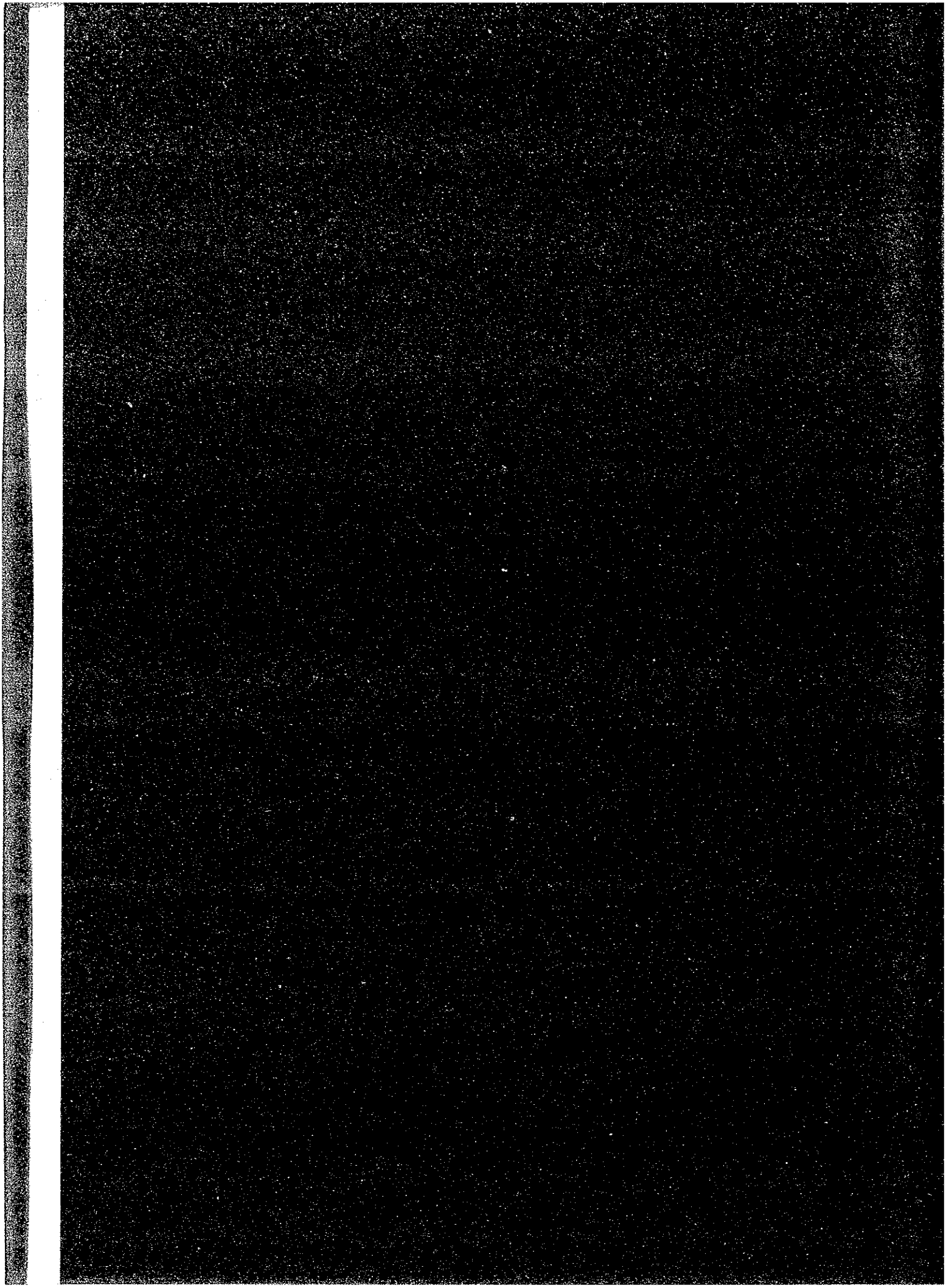

添付資料1．要請書

Technical Cooperation by the Government of Japan

APPLICATION

By the Government of HUNGARY
for a Development Study on " An integrated air pollution control plan in Miskolc and its environs"
to the Government of Japan

1. PROJECT DIGEST

Project Title: "The Study on an Integrated Air Pollution Plan in Miskolc and its Environs"

Location: Miskolc and its environs

Responsible Agency : Ministry for Environment and Regional Policy

Counterpart Agencies : related institutes, local governments, etc.

2. TERMS OF REFERENCE of the STUDY : is enclosed, accompanied with an Annex to the Item No.7 of the T/R.

EBP0312-12

ANNEX

Item No.7

"UNDERTAKINGS OF THE HUNGARIAN GOVERNMENT"

of

the Terms of Reference document of

"The Study on an integrated air pollution control plan in Miskolc and its environs"

conducted by JICA

This paper has been compiled by the Ministry for Environment and Regional Policy as an Annex to the document T/R to refer those subjects of the Item No.7 of the T/R which require further examination by both sides.

The Ministry for Environment and Regional Policy, who shall act as Counterpart Agency to the Team of JICA during the implementation process of the Study

is of the opinion that a standard modell prepared for the circumstances of developing countries shall not in general be applied in Hungary, and

would like herewith to inform that the responsibilities in connection with the undertakings listed under /1/a-h and/2/ of the Item No.7 of the T/R belong to the competence of different governmental bodies in Hungary, therefore the ensurance of the relevant undertakings requires arrangements to be done at governmental level.

It has been noted that the "Undertakings by the Requesting Government" are integrated parts of the documents of Applications for Technical Assistance by the Government of Japan in form of Development Study and Dispatch of Experts, conducted by JICA. In case of the development studies these undertakings are includeed in the documents of T/R and S/W. The document Form A_1 of the request for dispatch of experts contains also some of these undertakings listed under Item No. 4/g/-/j/.

In view of the Ministry for Environment and Regional Policy, taking into consideration all the aboves to conclude a general Agreement between the two Governments for conveniences including technical, legal and administrative questions to be provided for Japanese experts in connection with their staying and work in Hungary
The provisions of such a general Agreement would apply for all the related forms of the Technical Assistance of the Government of Japan implemented by JICA in different sectors of the economy, in Hungary.

Therefore, the Ministry for Environment and Regional policy has already asked the Ministry of International Economic Relations /NGKM/ as the competent authority to examine the possibility of a general solution of the subject matter. To this end the Framework Agreement concluded on the PHARE Programme between the European Commissions and the Government of Hungary could be considered as an example.

Note: the Agreement signed recently for the Dispatch of Japan Overseas Cooperation Volunteers /JOCV/ between the Government of Japan and Government of Hungary can be considered as another way of the solution, i.e to conclude an Agreement for Development Studies conducted by JICA in the field of environmental protection, in Hungary.

Budapest, October 1991

FBP 03-12-12

TERMS OF REFERENCE

PROJECT TITLE THE STUDY ON AN INTEGRATED AIR POLLUTION CONTROL PLAN IN MISKOLC AND ITS ENVIRONS

TYPE OF ASSISTANCE : DEVELOPMENT STUDY

1. Background of the Study

Miskolc, the second biggest city, and its environs have been one of the important industrial areas. Despite the recent reduction of industrial production which took place reflecting the drastic change in socio-economic and industrial situation, Miskolc and its environs still maintains its position as a major industrial area.

In addition to the industrial activities, private vehicles and public transportation systems are also important air pollution sources.

With the above in mind, it is considered necessary to formulate an integrated air pollution control plan which takes into account the future change and projection of industrial and social development in Miskolc and its environs.

To this end, firstly, the current situation of ambient air pollution and emission of air pollutants should be grasped through maximum use of existing environmental informations and data, and also through the data to be obtained by the study. Secondly, the possible future change and projection of the industrial and social development in the region should be examined. Thirdly, the analysis on the relationship between the emission of air pollutants and ambient air concentration should be made. Taking the outcomes of these researches and analyses into account, a comprehensive and regionally integrated air pollution control plan needs to be formulated.

2. Objectives of the Study

The objective of this study is to develop an integrated air pollution control plan based on the research and analysis on the relation between socio-economic activities and air pollution in Miskolc and its environs.

In addition, transfer of technology ranging from monitoring techniques to comprehensive planning methods would be made from the Study Team during the course of the Study.

3. Study Area

The Study area will cover Miskolc and its environs.

4. Scope of the Study

In order to achieve the objectives mentioned above, the study shall cover the following items.

4.1 Collection and Analysis of Existing Data

The Study will make maximum use of the existing information and data listed below. The Hungarian Government will make necessary arrangement to ensure the access to the existing information and data.

1) Meteorological Data
   Wind direction and velocity, ground temperature and humidity

2) Ambient Air Quality Data
   CO, DUST, SO_2, NOx, HC, O_3, Pb

3) Mobile Sources Data

a) Traffic volume in major roads
b) Exhaust gas concentration (Emission Factor)
c) Number of automobiles by type
d) Fuel content analysis data (Pb)
e) Fuel consumption
f) Others

4) Stationary Sources Data
a) Combustion facilities of factories (type and size of combustion facilities, volume and quality of fuel, dimension of stacks, etc.)
b) Residential heating systems (type and size of combustion facilities, volume and quality of fuel used)
c) Overall fuel content analysis data
d) Others

5) Data on Socio-Economic Condition
a) Future projection of socio-economic indicators closely related to air pollution (population, industrial production and its type, and traffic volume and its type, etc.)
b) Socio-economic development plan and policy related to air pollution

4.2 Field Survey

The Study Team will conduct field survey in cooperation with the Hungarian counter parts to obtain the necessary data.

1) Meteorological Survey
Wind direction and velocity, ground temperature and humidity

2) Survey of Mobile Sources
a) Traffic survey (number of cars by type, by road, and average travel speed)

3) Survey of Stationary Sources

a) Combustion facilities of major factories (survey items : DUST, SO_2, NOx, etc.)

b). Typical residences (survey items : DUST, SO_2, NOx, etc.)

4) Survey of Ambient Air Quality

CO, DUST, SO_2, NOx, HC, O_3, Pb

4.3 Analysis of the Air Pollution Mechanism

The Study Team will analyze the present air pollution mechanism in order to identify the contribution of each pollution source, ie. industrial factories, residences and traffic.

4.4 Analysis of the Projection of Population, Development and Change of Industries , and Traffic

Considering the change taking place in socio-economic activities, industrial activities and traffics, and also considering plans for future social and industrial development in the area, a comprehensive analysis should be made on the socio-economic conditions in the area. The output of this analysis will serve as a base for the examination of the emission reduction plan mentioned below

4.5 Recommendation for Air Pollution Control

1) Emission Reduction Plan

Based on the result of the researches and analyses mentioned above, a comprehensive emission reduction plan at area wide level should be formulated and proposed.

A reduction plan by sector, namely industry, residential heating systems and traffics should also be examined and proposed.

2) Supporting Measures to Implement the Reduction Plan

Supporting measures as well as measures need the coordination should be examined from a wide spectrum view point in order to ensure the effective implementation of the emission reduction plan. The following items will be examined taking into account the possible progress of the legislation, administration, and institution made by the Hungarian Government.

- Institutional building including strengthening of organization, staff and equipment
- Economic incentives such as tax favor and subsidy system
- Appropriate monitoring system for both emission and ambient air from stationary and mobile pollution sources
- Coordination with the national energy policy
- Prospect of business relevant to the environment (consulting firms, monitoring firms, etc.)

5. Study Schedule

The study implementation period shall be approximately 18 months.

6. REPORTS

The reports shall be written in English language.
The following reports shall be submitted to the Hungarian Government during the study:

Inception Report	20 copies
Progress Report (I)	20 copies
Interim Report	20 copies
Progress Report (II)	20 copies
Draft Final Report	20 copies
Final Report	40 copies

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7. UNDERTAKINGS OF THE HUNGARIAN GOVERNMENT

(1) To facilitate the smooth conduct of the Study, the Hungarian Government takes the necessary measures:

a) To secure the safety of Japanese Study Team (hereinafter refereed to as "the Team)
b) To permit the members of the Team to enter, leave and sojourn in Hungary for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees
c) To exempt the members of the Team from taxes, duties and other charges on equipment, machinery and other materials brought into and out of Hungary for the conduct of the Study
d) To exempt the members of the Team from income taxes and other 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 conduct of the Study.
e) To provide the necessary facilities to the Team for remittances as well as utilization of fund introduced into Hungary from Japan in connection with the conduct of the Study
f) To provide medical services as needed and its expenses will be chargeable on the members of the Team.
g) To secure permission for enter into private properties or restricted areas for the implementation of the Study.
h) To secure permission to take all data and documents (including photographs) related to the Study out of Hungary to Japan by the Team.

(2) The Hungarian Government will bear claims, if any arises against the members of the Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the conduct of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Team.

(3) The Ministry for Environment and Regional Policy will act as a

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counterpart agency to the Team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth conduct of the Study.

(4) The Hungarian Government will provide the Team with the follows, in cooperation with other relevant organizations:

a) Access to the existing data and information related to the Study
b) Counterpart personnel
c) Credentials or identification cards
d) Suitable office space with necessary equipment in Miskolc (if found necessary in Budapest as well).
e) One number of vehicle during the study in Hungary

8. UNDERTAKING OF JICA

8.1 For the implementation of the study, JICA shall take the followings:

1. to dispatch, at its own expense, Japanese Study Team to Hungary
2. to introduce Japanese expertise to the Hungarian counterpart personnel during the course of the Study
3. to prepare the equipment for the study
4. to pursue, to the possible extent, the use of local organization with appropriate expertise

9. STUDY COORDINATION AND MONITORING

9.1 The Counterpart Agency will establish a Steering Committee which will review and supervise the study activities and give general guidance to the Study Team.

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9.2 Where possible, the Coordinating Body and other counterpart agencies /related institutes, local governments, etc./ will designate counterpart staff to work with the Team for the entire duration of the Study.

9.3. The Counterpart Agency as a Coordinating Body will ensure to make available to the Team all existing relevant materials needed for the Study.

9.4 The Government will be represented by the Steering Committee members, who will be chosen in due course and who will be representatives from the various concerned agencies within the Government. The committee may consist of representatives from the following government entities:

- Ministry for Environment and Regional Policy
- Ministry of Welfare
- Ministry of Industry and Trade
- Ministry for Transport, Telecommunication and Water Management
- Institute for Environment Management
- Hungarian Meteorological Service
- Institute for National Public Health

9.5 The Steering Committee which will be convened by Ministry for Environment and Regional Policy shall meet to review the Inception Report, the Interim Report and the Draft Final Report.

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添付資料2．協議済（S/W）

SCOPE OF WORK

FOR

THE STUDY

ON

AN INTEGRATED AIR POLLUTION CONTROL PLAN FOR SAJO VALLEY AREA

IN

THE REPUBLIC OF HUNGARY

AGREED UPON BETWEEN

MINISTRY FOR ENVIRONMENT AND REGIONAL POLICY

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

BUDAPEST, APRIL 10 , 1992

Mr. PETER OTTLIK
HEAD OF AIR-, WATER-, AND
SOIL PROTECTION DEPARTMENT,
MINISTRY FOR ENVIRONMENT
AND REGIONAL POLICY

Mr. SENRO IMAI
LEADER,
PREPARATORY STUDY TEAM,
JAPAN INTERNATIONAL
COOPERATION AGENCY

I . INTRODUCTION

In response to the request of the Government of the Republic of Hungary, (hereinafter referred to as "Hungary"), the Government of Japan decided to conduct a study on an Integrated Air Pollution Control Plan for Sajo Valley Area in the Republic of Hungary (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study, in close cooperation with the authorities concerned of the Government of Hungary.

The present document sets forth the scope of work with regard to the Study.

II .OBJECTIVE OF THE STUDY

The objective of the Study is to formulate an integrated air pollution control plan based on the research and analysis on the relation between socio-economic activities and air pollution in Sajo Valley Area.

III . STUDY AREA

The Study area will cover Sajo Valley Area.

IV . SCOPE OF THE STUDY

In order to achieve the objective mentioned above, the Study shall cover the following items.

1.Collection and Analysis of Existing Data

(1)Meteorological Data
  (a) Wind direction and velocity, temperature and humidity on the ground

  (b) Vertical profile of wind direction, velocity and temperature

(2)Ambient Air Quality Data
  CO, Dust, SPM, SO_2, NO_x, Pb

(3)Stationary Sources Data
  (a) Combustion facilities of factories(type and size of combustion facilities, volume and quality of fuel, dimension of stacks, etc.)
  (b) Residential heating systems(type and size of combustion facilities, volume and quality of fuel used)
  (c) Overall fuel content analysis data
  (d) Emission factors
  (e) Others

(4) Mobile Sources Data
  (a) Traffic volume in major roads
  (b) Emission factors by type, by age
  (c) Number of automobiles by type, by age
  (d) Fuel content analysis data(pb)
  (e) Fuel consumption
  (f) Others

(5) Data on Socio-Economic Condition
  (a) Future projection of socio-economic indicators related to air pollution (number and distribution of population and household, industrial production and its type, traffic volume and its type, energy consumption and supply, etc.)
  (b) Socio-economic development plans and policies related to air pollution

(6) Laws and Regulations

(7) Administrative and Financial System

(8) Others

2. Basic Survey

(1) Meteorological Survey
  (a) Surface meteorology
  Wind direction and velocity, ground temperature, humidity and solar radiation
  (b) Upper layer meteorology
  Vertical profile of wind direction, velocity and air temperature

(2) Survey of Ambient Air Quality
  CO, Dust, SPM, SO_2, NOx(NO, NO_2), HC, O_3

(3) Survey of Stationary Sources
  (a) Combustion facilities of factories
    (survey items:CO, DUST, SOx, NOx, etc.)
  (b) Typical residences
    (survey items:CO, DUST, SOx, NOx, etc.)
  (c) Emission factor

(4) Survey of Mobile Sources
  (a) Traffic survey (number of cars by type and by road, and average travel speed)
  (b) Emission factor

(5) Survey of Elemental Composition of Suspended Particles

(6) Others

3. Analysis of the Air Pollution Mechanism and Development of a Simulation Model

(1) Arrangement and Analysis of the Data acquired through the Basic Survey described in above 2.

(2) Comprehensive Analysis of the Relationship among Meteorological Condition, Pollutants discharged and Ambient Air Quality

(3) Development of a Simulation Model based on the Results of the above (2)

4. Analysis of Future Conditions relevant to Air Pollution

(1) Analysis of Future Socio-Economic Conditions related to Air Pollution

(2) Estimation of Future Pollution Loads

(3) Application of the Simulation Model to Predict the Future Ambient Air Quality, and to Identify the Pollution Contribution by Source

5. Recommendation of an Integrated Air Pollution Control Plan

(1) Emission Reduction Plan
  (a) Determination of targets in ambient air quality
  (b) Allotment of emission to be reduced
  (c) Study of control measures for sources from the viewpoint of technology, economy and administration
  (d) Formulation of a comprehensive emission reduction plan

(2) Supporting Measures to Implement the Emission Reduction Plan
  (a) Institutional building including strengthening of organization, staff and equipment
  (b) Economic incentives such as tax favor and subsidy system
  (c) Appropriate monitoring system for both emission and ambient air quality
  (d) Others

(3) Implementation Plan for the Emission Reduction Plan
  (a) Schedule
  (b) Cost estimation

V. WORK SCHEDULE

The Study will be carried out in accordance with the attached tentative work schedule.

VI. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Hungary.

1. Inception Report:
   Thirty (30) copies within a half (0.5) month after the commencement of the Study.

2. Progress Report(1):
   Thirty (30) copies within thirteen and half (13.5) months after the commencement of the Study.

3. Interim Report:
   Thirty (30) copies within sixteen and half (16.5) months after the commencement of the Study.

4. Progress Report(2):
   Thirty (30) copies within nineteen and half(19.5) months after the commencement of the Study.

5. Draft Final Report:
   Thirty (30) copies within twenty-four and half (24.5) months after the commencement of the Study. The Government of Hungary will provide JICA with its comments within one (1) month after its reception of the Draft Final Report.

6. Final Report:
   Fifty (50) copies within twenty-seven (27) months after the commencement of the Study.

VII. UNDERTAKING OF THE GOVERNMENT OF HUNGARY

1. To facilitate the smooth conduct of the Study, the Government of Hungary shall take the necessary measures:

(1) To secure the safety of the Japanese study team (hereinafter referred to as "the Team").

(2) To permit the members of the Team to enter, leave and sojourn in Hungary for the duration of their assignment therein , and exempt them from foreign registration requirements and consular fees.

(3) To exempt the members of the Team from taxes, duties and other charges on equipment, machinery and other materials brought into and out of Hungary for the conduct of the Study.

(4) To exempt the members of the Team from income taxes and other 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.

(5) To provide necessary facilities to the Team for remittance as well as utilization of the funds introduced into Hungary from Japan in connection with the implementation of the Study.

(6) To secure permission for entry into private properties or restricted areas for the implementation of the Study.

(7) To secure permission for the Team to take all data and documents related to the Study out of Hungary to Japan.

(8) To provide medical services as needed. Its expenses will be chargeable on members of the Team.

2. The Government of Hungary will bear claims, if any arises, against the members 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 members of the Team.

3. The Ministry for Environment and Regional Policy shall act as counterpart agency to the Team, and also as coordinating body in relation with other relevant organizations for the smooth implementaion of the Study.

4. The Ministry for Environment and Regional Policy will, at its own expense, provide the Team with the followings in cooperation with other relevant organizations:

(1) Available data and information related to the Study.
(2) Counterpart personnel.
(3) Suitable office space in Miskolc with office equipment
(4) Credentials or identification cards.
(5) Appropriate number of Vehicles with driver(s) during the Study in Hungary

Ⅷ. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take following measures:

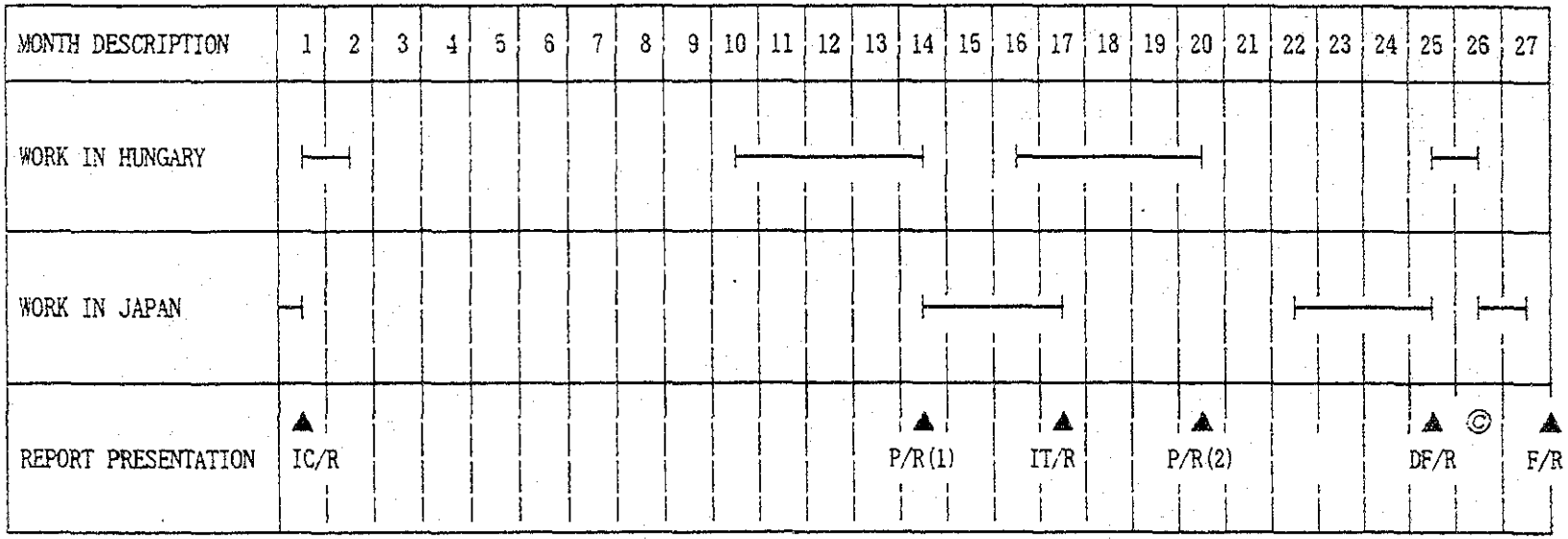
1. To dispatch, at its own expense, the Team to Hungary.

2. To perform technology transfer to the Hungarian counterpart personnel in the course of the Study.

Ⅸ. CONSULTATION

JICA and the Ministry for Environment and Regional Policy shall consult with each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE WORK SCHEDULE



NOTE: IC/R : Inception Report
P/R : Progress Report
IT/R : Interim Report
DF/R : Draft Final Report
F/R : Final Report
© : Comments

添付資料3．議事録（M/M）

MINUTES OF MEETINGS
FOR
THE STUDY ON AN INTEGRATED AIR POLLUTION CONTROL PLAN FOR SAJO VALLEY AREA
IN
THE REPUBLIC OF HUNGARY

BETWEEN
THE MINISTRY FOR ENVIRONMENT AND REGIONAL POLICY,
RELEVANT MINISTRIES AND ORGANIZATIONS IN HUNGARY
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BUDAPEST, APRIL 10, 1992

MR. PETER OTTLIK

HEAD OF AIR-, WATER-, AND
SOIL PROTECTION DEPARTMENT,

MINISTRY FOR ENVIRONMENT
AND REGIONAL POLICY

MR. SENRO IMAI

LEADER,
PREPARATORY STUDY TEAM

JAPAN INTERNATIONAL
COOPERATION AGENCY

In response to the request of the Government of the Republic of Hungary, the preparatory study team (herein after referred to as "the Japanese Mission") was sent to Hungary by the Japan International Cooperation Agency (hereinafter referred to as "JICA") for a period from March 29 to April 16, 1992 to discuss with the Ministry for Environment and Regional Policy, other relevant Ministries and Organizations, the Scope of Work for the Study on an Integrated Air Pollution Control Plan for Sajo Valley Area(hereinafter referred to as "the Study").

The Ministry for Environment and Regional Policy organized a steering committee consisted of Representatives of Ministries and Organizations relevant to the Study.

A series of the Steering Committee Meeting with attendance of the Japanese Mission were held on March 30, April 7, 8, and 9 at the Ministry for Environment and Regional Policy. A list of those who attended the meetings is attached herewith as Annex I. The draft Scope of Work proposed by the Japanese Mission was discussed in detail between the Hungarian side and the Japanese Mission, and the final draft was prepared. Both sides agreed to adopt the Scope of Work for signing with the following understandings:

1. The organization for the Study was understood as follows:

(1) The Study is to be done as a cooperative work between Japanese party and Hungarian party.

(2) Japanese organization

(a) JICA will organize a Study Team through a contract(s) with Japanese consultant firm(s).

(b) The Study Team will carry out the Study in close cooperation with the Hungarian Counterpart Team. Hungarian consultant(s) with qualified experience may also be used under the contract with, and under the supervision of the Study Team if it is necessary and appropriate to entrust them a part of work to be done by the Study Team.

(3) Hungarian organization

(a) The Ministry for Environment and Regional Policy and other related Ministries, Institutes, Organizations will designate counterpart personnel (the Hungarian Counterpart Team) to work with the Study Team.

(b) The Steering Committee consisted of Representatives from the following organizations, will review and supervise the Study activities and give general guidance to the Study Team.

- Ministry for Environment and Regional Policy
- Ministry of Welfare
- Ministry of Industry and Trade
- Ministry for Transport, Telecommunication and Water Management
- Hungarian Meteorological Service
- National Institute of Hygiene

2. The Study area will be the area illustrated on the map attached herewith as Annex II.

3. The name of the Study for the draft Scope of Work originally proposed by the Japanese Mission was "the Study on an Integrated Air Pollution Control Plan in Miskolc and its Environs" in accordance with the original Terms of Referrence proposed by the Hungarian Government. Taking into consideration topographical charactaristic of the Study area defined through a series of discussions and at the request by the Hungarian side, both sides agreed to adopt the name of the Study as "the Study on an Integrated Air Pollution Control Plan for Sajo Valley Area".

4. Following the visit of the Japanese Mission to Miskolc, a study work plan (for consideration), including rather detailed contents of the Study components, equipment to be required, demarcation of the work, technical fields required for members of the Hungarian Counterpart Team, was prepared by the Japanese Mission. And it was presented for the discussion at the Steering Committee held on 7th April 1992 to facilitate the mutual understanding on the outline of the study work.

After the series of discussions, the new version of a study work plan was prepared (attached herewith as Annex III). Both sides agreed that it would give the base for the smooth implementation of the Study, and came to the mutual understanding that due efforts might be made by both sides.

5. The Japanese Mission mentioned that information on the present and future socio-economic conditions in the Study area might be needed for, in particular, the examination of future change and projection of the structures of pollution sources. Representatives of the Ministry of Industry and Trade stated that the Ministry was prepared to give available information , and further stated that she would make arrangements with relevant institutions to fulfil the need.

6. The Japanese Mission requested that the data acquired through the fixed monitoring stations to be established by the PHARE-ENVIRONMENT PROGRAMME be made available for the Study. Hungarian side agreed on this request.

7. With respect to VII.1.(1) of the Scope of Work, the Japanese Mission explained that it meant " to inform the members of the Study Team any existing risk in the Study area and to take any measures deemed necessary to secure the safety of the Study team,".

8. With respect to VII.1.(3) of the Scope of Work, the Hungarian side mentioned that the exemption could be ensured on conditon that JICA or the Study Team informed to the Ministry for Environment and Regional Policy the following information more than two weeks before the arrival of equipment machinery and other materials brought into Hungary.

(1) Name of items, type, specification and quantity
(2) Information on whether (a) they will be left in Hungary as a present (b) they will be brought out of Hungary again, or (c) treatment of equipment, etc. is not yet decided by this moment.

9. The Hungarian side requested strongly that the equipment procured by JICA be donated to the Hungarian side after the completion of the Study. The Japanese Mission took note of it and mentioned that he would convey the desire of the Hungarian side to JICA Headquarters.

10. With respect to VII.1.(7) of the Scope of Work, it was agreed by both sides that the Study Team would submit, if found necessary, a list of data and documents to the Ministry for Environment and Regional Policy.

11. With respect to VIII.1. of the Scope of Work, the Japanese Mission gave the interpretation that the following expenses were included as the undertaking of JICA.

(1) Expense for the work to be done by the Study Team itself
(2) Expense for the work to be done by Hungarian consultant(s) under the contract between the Study Team and the consultant(s)
(3) Expense for necessary supporting staff to be recruited by the Study Team

Annex I

LIST OF ATTENDANTS

Ministry for Environment and Regional Policy /KTM/
- Mr. Péter OTTLIK
- Mr. Robert RAKICS
- Ms. Zsuzsa Iványi,dr.
- Mr. István TÓKÉS
- Ms. Agnes Sasvári

Institute for Environmental Protection /KVI/-KTM
- Dr. István ŐRI

North Hungarian Enviromental Inspectorate /EPI/KTM
- Mr. István GAVALLER
- Mr. József KOVÁCS
- Mr. András BISZTERSZKY

International Project Office-Institute for Environmental Management,KTM
- Mr. András BEZEGH
- Ms. Agnes DIÓSZEGI

Ministry of Industry and Trade /IKM/
- Ms. Agnes TIBIÁSSY

Ministry of Welfare - National Public Health and Municipal Health Officer Service /ÁNTSZ/Budapest
- Ms.Ildiko SZENTGYÖRGYI,dr.

ÁNTSZ-Miskolc
- Mr. Ferenc NAGY

National Institute of Hygiene /OKI/
- Ms. Magdolna KERTÉSZ,ph,D.

National Meteorological Service /OMSZ/
- Mr. Zsoly ZA'RBOK
- Mr. Robert TÓTH

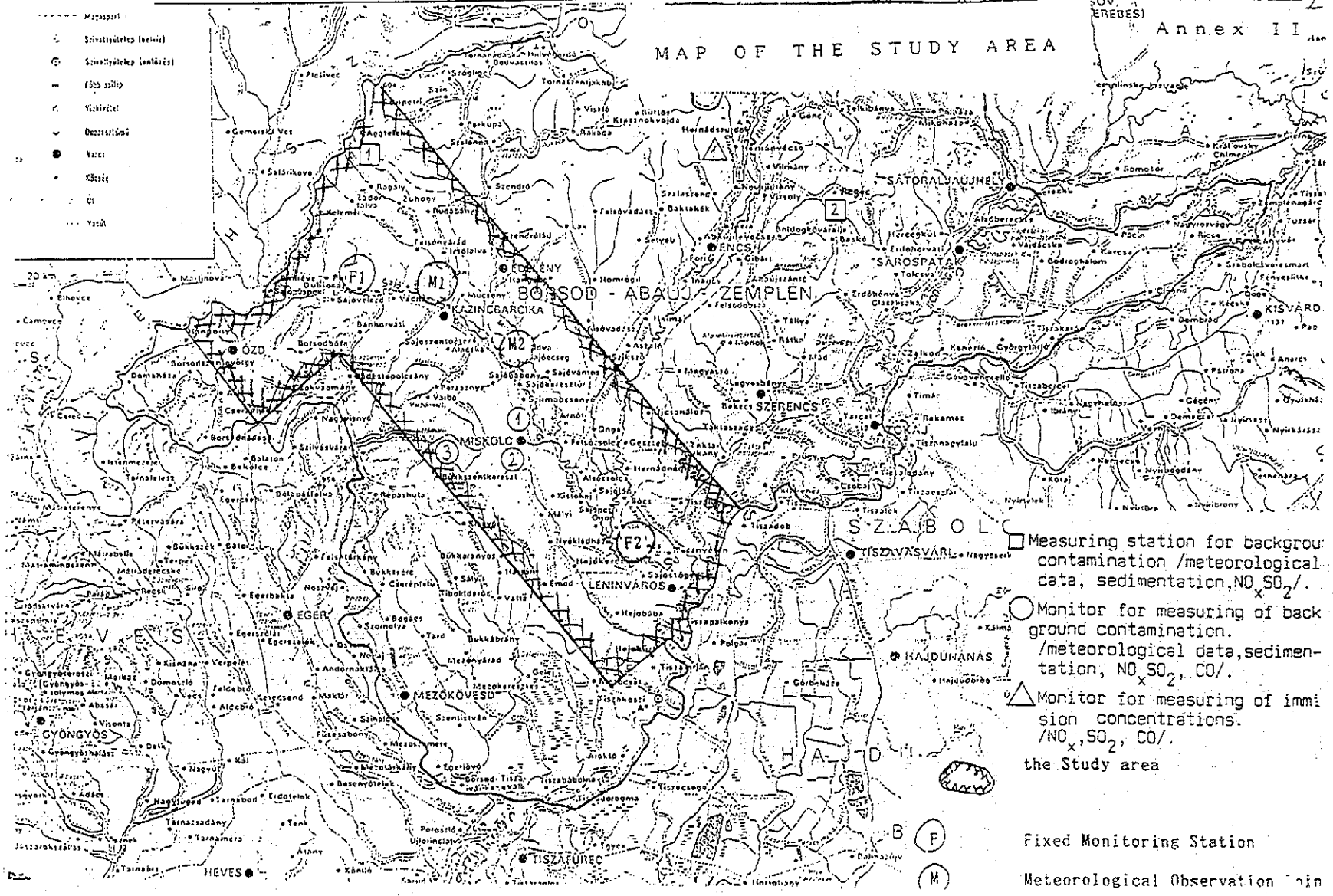
Ministry for Transport, Telecommunication and Water Management /KHVM/
- Dr. Miklós SZOBOSZLAY

Preparatory Study Team, Japan International Cooperation Agency
- Mr. Senro IMAI
- Mr. Masaya TOMA
- Mr. Tadashi TAKEUCHI
- Mr. Kazuo MATSUSHITA
- Mr. Yoshihide TERANISHI
- Mr. Toshiharu OCHI
- Mr. Shitoshi FUKAYA

ÉSZAK-MAGYARORSZÁGI KÖRNYEZETVÉDELMI FELÜGYELŐSÉG MŰKÖDÉSI TERÜLETE BAZ MEGYE

Annex II

MAP OF THE STUDY AREA



□ Measuring station for backgrou contamination /meteorological data, sedimentation, NO_x SO_2/.

○ Monitor for measuring of back ground contamination. /meteorological data, sedimentation, NO_x SO_2, CO/.

△ Monitor for measuring of immi sion concentrations. /NO_x, SO_2, CO/.

the Study area

(F) Fixed Monitoring Station

(M) Meteorological Observation ain

A STUDY WORK PLAN

1. STUDY WORK PLAN ON THE BASIC SURVEY

To implement the Basic Survey described in the "IV. SCOPE OF THE STUDY" of "the Scope of Work", the following study work plan will be proposed.

1-1 Meteorological Survey

a) Surface Meteorological Observation

- Observation will be made at 9 points including the sites of existing 4 ambiert air monitoring stations and one meteorological observation station in Miskolc illustrated in the map attached to the Minutes of Meetings.
- Continuous observation will be made for a period of about one(1) year.
- Observation items will be wind direction and velocity, ground temperature, humidity and solar radiation.

* 4 complete sets of meteorological observation equipment, and necessary additional equipment for existing ambient air monitoring stations will be prepared by Japanese side.

* Mainly, Hungarian side will be in charge of daily operation and maintenance.

b) Upper Layer Meteorological Observation

- Observation will be made at 2 points as illustrated in the map.
- Vertical profile of wind direction, velocity and air temperature will be observed.
- Observation up to 1500m-2000m above ground will be made by using lower-layer radio-sonde and pilot balloon .
- Observation will be made at each season (total 4 seasons) and duration of the observation will be 4-5 days at each season.

* Necessary equipment will be purchased by the Japanese side.
* Necessary supporting staff for observation will be recruited temporarily by the Study Team.
* The Study Team and Hungarian side will supervise the observation work.

1-2 Survey of Ambient Air Quality

a) Automatic Monitoring

- Ambient air quality monitoring will be made at 6 fixed stations including 4 existing monitoring stations.
- Monitoring items will be CO, SPM, SO_2, NO_x (NO, NO_2), HC and O_3. However, the existing monitoring station at Aggtelek will provide data only for SO_2 and NOx.
- Duration of automatic monitoring will be for a period of one(1) year.

* 2 complete sets of automatic monitoring equipment, and necessary additional equipment for existing ambient air monitoring stations will be prepared by Japanese side.
* Mainly, Hungarian side will be in charge of daily operation and maintenance.

b) Wet Type Monitoring

- Wet type monitoring currently undertaken at 50 existing monitoring points should be continued for the same period of automatic monitoring.
- Inter-calibration with automatic dry type analysis should be made in advance and the data should be made available for the Study.

* Hungarian Side will make Wet type monitoring.

c) Simplified Monitoring

- Simplified monitoring for NO_2 will be made aiming at grasping the features of NO_2 pollution around the roads including the reduction rate with the distance from the road.

* Necessary equipment and materials will be purchased by Japanese side.
* The Study Team and Hungarian side will do the work together.

d) Falling Dust

- Monitoring of falling dust currently undertaken at about 40 points, using dust jar should be continued for the duration of the Study.

* Hungarian side will be in charge of monitoring.

e) Concentration and Elements of TSP and Falling Dust

- Sampling of TSP through High-Volume Air Sampler should be continued for the duration of the Study.
- Analysis on the elements of TSP and Falling Dust will be made for Pb, Cd, Cr, Ni, Fe, Cu, Zn, Mn, Sn, etc.
- Chemical element mass balance(CMB) analysis will be made to identify the share of contribution by pollution source for the above elements.

* Necessary additonal equipment and materials will be prepared by Japanese side.
* Sampling of TSP and analysis of the elements of TSP and Falling Dust will be done by Hungarian side. The decision on which TSP or Falling Dust be used for the analysis of element will lie with Hungarian side. Analysis may be done for only those samples which Hungarian side examined quality of sampling.
CMB analysis will be done by the Study Team.

(f) Analysis of Hg

- Sampling and analysis of Hg will be done.

* Necessary additional equipment will be prepared by Japanese side

1-3 Survey of Emissions From Stationary Sources and Mobile Sources

a) Emissions from Stationary Sources

- Items of emission to be studied will be CO, DUST, SOx, NOx, HC and Hg.
- Data of emissions from stationary sources should be made available mainly through the existing data collection method.
- Complementary survey on the capacity of the major factories in terms of production, fuel consumption and measurement of HC and Hg should be made.
  * The Study Team and Hungarian side will survey together.
- Complementary on-site flue gas monitoring should be made for medium-sized pollution sources
  * Necessary additional equipment and materials will be prepared by the Japanese side.
  * Mainly, the Hungarian side will be in charge of the monitoring.
- On-site monitoring for the pollution from residential heating facility might be made.
  * The Study Team and Hungarian side will monitor together.
- Analysis of fuel content for major fuels should be made.
  * The Study Team will use a Hungarian Consultant for the analysis.
- Siting of the stacks should be translated into mesh number.
  * The Study Team will do the work.

b) Emissions from Mobile Sources

- Items of emissions to be studied will be CO, SOx, NOx and HC.
- Emission factors by mobile type and mobile age should be made available from existing data.
- If found necessary, complementary test should be made in Budapest using existing chassis dynamometer.
  * The Study Team will use a Hungarian Consultant for the test.
- Supplementary traffic volume survey will be made at several major traffic points.
  * The Study Team will recruit supporting staff for the survey.
- Driving speed/mode test should be made.
  * The Study Team will use a Hungarian Consultant for the test.

2 SIMULATION MODEL

- Items of pollutants to be simulated through a simulation model will be CO, SOx and NOx.
- Concerning DUST, CMB analysis will be adopted to identify the share of contribution of pollution sources and to come up with pollution control plan.
- The simulation model to be developed should be appropriate enough to prepare the integrated air pollution control plan.

3 HUNGARIAN COUNTERPART TEAM

In the Hungarian Counterpart Team, the following members will be included to work with the Study Team for the smooth implementation of the Study.

Technical Field	Items in Charge
Supervision	Entire Study
Socio-economic analysis	Society and economy at present and their furture predicton
Meteorological observation	Upper layer and surface meteorology
Air quality monitoring	Ambient Air Quality Monitoring
Pollution source investigation	Stationary/ mobile source measurement and analysis
Modeling and simulation	Simulation analysis
Pollution source control	Stationary and mobile source control
Supporting measures planning	Organizations, regulations

4 DEMARCATION OF STUDY WORK AND EXPENSES

4-1 Supply of Equipment and Materials for the Study Work

- Existing equipment and materials in Hungary will be utilized for the Study work as much as possible.
- Hungarian side bears the expenses for additional spareparts, supplies, reagents for existing equipment for the Study work.
- The following expenses for the additional equipment and materials found necessary for the study will be borne by JICA.
  a) Procurement of additional equipment and materials
  b) Procurement of sparepart, supplies and reagents for the above-mentioned additional equipment
  c) Transportation cost for the above-mentioned equipment, materials, sparepart, supplies and reagents
- The Hungarian Government exempts the members of the Team from taxes,duties and other charges on the above-mentioned equipment and materials brought into Hungary.(The equipment and materials will remain the property of JICA unless otherwise agreed upon.)

4-2 Setting-up of Equipment and Materials

- Hungarian side provides,at her own expense, place,building,shelter for equipment and materials.
- Hungarian side bears the cost for foundation work for the installation of equipment,work for power supply,inland transportation from the place of arrival of goods to the place of installation.
- Hungarian side coordinates with authorities concerned and applies for authorities permit for the installation of equipment and materials.
- Japanese side bears the cost to dispatch engineer(s) for installation and testing of monitoring station equipment at the time of installation, if it is necessary.

4-3 Operation,Maintainance and Security of Equipment and Materials

- Hungarian side bears the expenses for electricity and water for operation of equipment.
- Hungarian side takes necessary measures to maintain the equipment and secures the equipment and materials properly.

4-4 Collection of Available Information/Data

- Hungarian side provides the Study Team with available information and data at its own expense.In case that it needs expense to make photocopies, or to purchase books,maps, etc., the Study Team can pay for it.

PREPARATORY STUDY ON AN INTEGRATED AIR POLLUTION CONTROL PLAN IN MISKOLC AND ITS ENVIRONS TN THE REPUBLIC OF HUNGARY

INCEPTION

MARCH, 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

1. Introduction

In response to the request of the Government of the Republic of Hungary, the Government of Japan decided to conduct a study on an Integrated Air Pollution Control Plan in Miskolc and its Environs (hereinafter referred to as "the Study ", and entrusted it to the Japan International Cooperation Agency(JICA).

JICA dispatches a preparatory study team headed by Mr. Senro Imai, Development Specialist, Japan International Cooperation Agency (hereinafter referred to as "the Mission") to Hungary from 29 March to 16 April, 1992.

2. Study Objectives and Procedures

The objectives of the Mission to Hungary are;

(1) to confirm the background of the Study objectives, contents of the Study , Scope of the Study, Priority of the Study components, desires of the Hungarian side,
through discussions with concerned officials of Hungarian Govnernment, field reconnaissance and collection of data and information,

(2) and to agree and sign the Scope of Work(S/W) with the representative of the Hungarian Government for the Study. (Minutes of Meetings(M/M) will also be signed for the details of the result of meetings on the Study plan.)

The procedures of the preparatory study are as follows;

(1) The preparatory study team (the Mission) examines the contents of Terms of Reference which document was sent from Hungarian Government to Japanese Government on November, 1991, and prepares the draft of S/W and Questionnaire in Japan. The Mission consults with JICA headquaters, the Ministry of Foreign Affairs and the Environment Agency of Japan about the draft of S/W prior to their visit to Hungary.

(2) The Mission conducts a series of discussions with the concerned officials of the Hungarian Government and field surveys in Hungary. S/W and M/M are signed and exchanged by both parties.

(3) The Mission, after their return to Japan , makes a Preparatory Study Report to submit to JICA and concerned Ministry/Agency. The report includes results of discussions and field surveys in Hungary, items of proposed Study, Study method, demarcation of Study works among concerned Hungarian Ministries/organizaions and the Study team, schedule, necessary technical fields of the Study team members, equipment and materials fpr the implementation of the Study, etc.

(4) Following the report of the preparatory study, JICA selects a Japanese consultant firm among its registered consultants by proposal method and a contract is made for the implementation of the Study between JICA and the selected consultant.

(5) The Study is then implemented by a Study team. JICA Advisory Committiee is also organized for the surpervision of the Study work.

3. Mission Members

The Mission is composed of seven (7) members as follows:

Name	In charge of, Position (Period of Stay in Hungary)
(1) Mr.Senro Imai	Leader Development Specialist,JICA (29,March - 11,April)
(2) (to be decided soon)	Cooperation Policy Ministry of Foreign Affairs (6,April - 11,April)
(3) Mr.Tadashi Takeuchi	Ambient Air Deputy Director,Air Pollution Control Div., Air Quality Bureau,Environment Agency (29,March - 11,April)
(4) Mr.Kazuo Matsushita	Fixed and Mobile Pollution Sources Supervisor,Hiroshima Prefectural Research Center for Environmental Science (29,March - 11,April)
(5)Mr.Yoshihide Teranishi	Study Planning Second Social Development Study Div., Social Development Study Dept., JICA (29,March - 11,April)
(6)Mr.Toshiharu Ochi	Observation & Measurement Equipment Planning Nippon Environmental Pollution Control Center (29,March - 16,April)
(7)Mr.Sitoshi Fukaya	Interpreter(Hungarian-Japanese) International Cooperation Service Center (29,March - 16,April)

4. Study Schedule (tentative)

JICA proposes, through the Embassy of Japan, to the Hungarian side the following schedule. The Ministry for Environment and Regional Policy is kindly requested to arrange the necessary meetings and field surveys of the Mission to the concerned organizations, places in Budapest and Miskolc as written below.

29 March (Sunday) PM: Mission arrives Budapest by SR468

30 Mar. (Monday) (at Budapest)

AM: *Courtesy call to and meeting with the Embassy of Japan

PM: *Courtesy call to and meeting with the Ministry for Environment and Regional Policy

1. Courtesy call to the representative of the Ministry

2. Confirmation of the arrangement of the schedule of meetings, field surveys in Budapest and Miskolc

3. Presentation/explanation of Draft Scope of Work document (S/W) by the Mission
(Brief discussion will be followed. Participation of Steering Committee members/concerned Ministries will be also appreciated.)

*Courtesy call to the Ministry of External Relations

31 Mar. (Tuesday) (at Budapest)

AM: *Meeting with the Steering Committee/representatives from various concerned Ministries/Agencies of Hungarian Government

1. Explanation by the Mission on the main points of the Draft S/W incl. general scope of the Study, Study area, Study structure and components, demarcation of the Study work and Undertakings between Hungarian and Japanese side, Study Schedule, Reporting.

2. Explanation by the Hungarian side on the state of the air pollution in Miskolc, the activities taken including monitoring of ambient air pollution sources, meteorologocal observation, and on the availability of data on emission factors of auto-mobile exhaust gas and flue gas of factories, etc.

3. Discussion on the above.

(note) Officials of the Inspectorate and concerned Institutes in Miskolc are requested to attend this meeting for the explanation and discussion.

31 Mar. (Tuesday) PM: the Mission leaves Budapest for Miskolc by car.

1 April (Wednesday) (at Miskolc)

AM: Meeting with Officials of concerned Institutes/ organizations in Miskolc

1. Explanation by the Mission on the general scope of the Study

2. Discussion on
*identification of the Study area/air basin
*structure and components of the Study
*methods of the Study (meteorological observation, monitoring of ambient air and pollution load, use of a mobile monitoring vehicle, prediction model, etc.)

PM: Visit and meeting with North Hungarian Environmental Protection Inspectorate (EPI) and its Laboratory

Agenda of the meeting will be;
*state of the control by EPI on industries
*sites of factories and their pollution load
*format and items of the questionnaire to be sent to and filled in by factories (kinds of fuels, volume of fuels used, pollutants concentrations of flue gas, etc.)
*magnitude of the on-site monitoring of emmision gas from factories needed during the study (number of factories to be monitored, pollutants to be measured)
*monitoring equipments required for the above monitoring

(note) *Officials who undertake on-site monitoring of flue gas shall be invited to this meeting
*the following information is to be prepared by the Hungarian side for this meeting
a) a map showing locations of major pollution sources in the area (big-sized and medium sized factories should be covered)
b) a list of existing equipment for on-site flue gas monitoring (incl. mobile monitoring vehicle)

2 Apr. (Thursday) (at Miskolc)

AM: Visit and meeting with the Institute of Public Health and National Hygiene (IPHNH)

Agenda of the meeting will be;
*identification of the Study area (air basin)
*the state of ambient air pollution, its features and actions taken by IPHNH
*availavility of the data (ambient air quality data and meteorological data available

through existing monitoring network)
*sites of upper layer meteorological observation (for a prediction model)
*identification of the boundary condition (background air quality, etc. for a prediction model)
*equipment required for the Study

(note) *the following information is to be prepared by the Hungarian side for this meeting
a) a list of existing equipment for monitoring incl. mobile vehicles, etc. and quipment to be donated by European Community, if any)
b) a map showing the sites of monitoring stations (automatic and semi-automatic), and data on the frequency of measurement, items of the measurement

PM: Observation of Ambient Air Quality Montoring Station in the area

1. Visit to the automatic and semi-automatic ambient air monitoring station(s)
2. Demonstration on how monitoring (sampling, transportation to the laboratory and analysis) is implemented would be appreciated

3 Apr. (Friday) (at Miskolc)

AM: Visit to Factories

Arrangements described below would be highly appreciated
*visit to 5-6 factories in various industrial types which JICA's last mission did not visit.
*please include medium-sized factories and one big-sisez factory.
*Mission is also interested in seeing processing and pollution control facilities in the factories.

PM: Observation of Pollution by Traffic

1. Observation of main traffic routes
2. Visit to the candidate sites for checking traffic volume
3. Visit to a laboratory responsible for testing and checking of the exhaust gas

4 Apr. (Saturday) (at Miskolc)

Mission members will have a look at the general conditions of Miskolc and its environs area by car and on foot, hopefully with Hungarian counterpart(s).

5 Apr. (Sunday) (at Miskolc)

No official schedule is made.

6 Apr. (Monday)

AM: (at Miskolc)
Meeting with the concerned institutes/organizations
1. Report on the works done in Miskolc (by both sides)

2. Discussions on the items pertaining to the implementation of the Study including demarcation of the work

PM: Mission leaves Miskolc for Budapest

7 Apr. (Tuesday) (at Budapest)

Meeting with the Steering Committee/representatives from various concerned Ministries/Agencies
(Participation of officials in Miskolc will be required.)

1. Report on the works done in Miskolc (by both sides)
2. Discussions on the whole Study plan

8 Apr. (Wednesday) (at Budapest)

Meeting with the Steering Committee/representatives from various concerned Ministries/Agencies

Discussion on a draft of S/W and preparation of a draft of M/M

9 Apr. (Thursday) (at Budapest)

AM: Meeting with the Steering Committee/representatives from various concerned Ministries/Agencies

Preparation of final S/W and M/M

PM: Visit to the offices of EC, USAID and Regional Environment Center

10 Apr. (Friday) (at Budapest)

AM: Signing Ceremony (S/W and M/M)
between the representative of the Ministry for Environment and Regional Policy and the Leader of the Mission

PM: Mission reports the result to the Embassy of Japan.

11 Apr. (Saturday)

AM: Mission members except two members (member for Equipment Planning and a Interpreter) leaves Budapest for Japan via Vienna by Flight MA-590.

* Two members (member for Equipment Planning and a Interpreter) will continue to study in Budapest until 16 April (Wednesday).

STUDY ON AN INTEGRATED AIR POLUTION CONTROL PLAN
IN MISCOLC AND ITS ENVIRONS

SCOPE OF WORK(S/W) MISSION
29 MARCH - 16 APRIL 1992

QUESTIONNAIRE

1 INFORMATION ADDITIONALLY REQUIRED

1) Exhaust gas emission factors by vehicle types and driving modes
2) Flue gas emission factors for the major type of factories
3) List of existing equipment for;
   - ambient air qulaity monitoring at monitoring stations
   - ambient air quality measurement at laboratory
   - meteorologocal observation (ground level and upper layer)
   - flue gas monitoring
   - van type vehicle (equipment mounted to the van/bus)

   [Note] Please list up those equipment to be utilized/available for the Study in Miskolc.
4) Information on the upper layer meteorological conditions in Miskolc area (any outputs of the study/research undertaken in Miskolc area)
5) Availability of eqipment for upper layer meteorological observation (vertical distribution of temperature, wind velocity and directions at upper levels) and their prices in Hungary.
6) Availability of private consultants who could undertake (1) upper layer meteorological observation (day and night) (2) counting of traffic volume at road sides, and their cost.

2 PARTICIPATION OF HUNGARIAN OFFICIALS FOR THE FIELD WORK IN MISKOLC

1) Number of counterpart officials who will participate in the work on ambient air quality monitoring, and data analysis
2) Number of counterpart officials who will participate in the work on on-site flue gas monitoring, and data analysis
3) Number of counterpart officials who will participate in the work on meteorological observation, and data analysis

3 MATERIALS TO BE PREPARED BY THE HUNGARIAN SIDE FOR THE S/W MISSION

1) Map of the Monitoring Network in the Miskolc and its Environs

- precise location of each fixed monitoring stations (please include "background monitoring stations")
- items measured regularly (ex. SO2, NOx)
- measuring modality of each station (ex. automatic, semi-automatic)
- measuring methods of pollutants

Note 1 If there are monitoring stations in the nothern area like Ozd area, please include them.
2 Please identify those stations where the meteorological observation at ground level are conducted.

2) Map of the Ambient Air Quality (Major Items) by Monitoring Station

- illustration of the ambient air quality monitored at each of the existing monitoring stations
- figures of the air qiality put in the map will be yearly average, maximum value of daily average etc.

3) Map of Industrial factories in the Miskolc and its Environs

- precise location of industrial factories (big-sized and medium-sized factories) and number of stacks
- industrial type of each factory (If possible, please identify the facility type)

4) Map of Pollution Loads by Industrial Factories

- illustration of the pollution load (yearly base) at each factory (or at each stack, if possible)

WHAT IS S/W?

The S/W (Scope of Work) is the document which is signed and exchanged by the preliminary study team dispatched by JICA and the executing Agency of the government of a recipient country following consultations between the two sides.

The S/W generally has the following contents.

(1) Purpose of Study
(2) Scope of Study
(3) Outline of Study
(4) Study Schedule
(5) *Types of Reports Required, Number of Reports to be Submitted and Report Submission Dates*
(6) Undertakings by Japanese and Recipient Sides

In some cases, the Minutes of Meetings (M/M) are compiled to refer to those items whose inclusion in the S/W is unsuitable and/or those subjects requiring further examination by both sides.

(A) = The Study Title
(B) = Name of The Recipient Country's Executing Agency
(C) = Name of The Recipient Country

Standard Model of S/W

(PROVISIONAL)

SCOPE OF WORK
FOR
[(A)]
AGREED UPON BETWEEN
[(B)]
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Name of Place Signed: Date:

Signed:
[(B)]

Signed:
LEADER OF THE PRELIMINARY STUDY TEAM,
THE JAPAN INTERNATIONAL COOPERATION AGENCY

I. INTRODUCTION

In response to the request of the Government of [(C)] (hereinafter reffered to as " "), the Government of Japan decided to conduct [(A)] (hereinafter reffered to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter reffered to as "JICA" , the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of [(C)].

The present document sets forth the scope of work with regard to the Study.

II. OBJECTIVES OF THE STUDY

III. OUTLINE (or SCOPE) OF THE STUDY

IV. WORK (or STUDY) SCHEDULE

V. REPORTS

JICA shall prepare and submit the following reports in (English) to the Government of [(C)].

VI. UNDERTAKING OF THE GOVERNMENT OF [(C)]

1. To facilitate smooth conduct of the Study, the Government of [(C)] shall take necessary measures:
(1) to secure the safety of the Study team,
(2) to permit the members of the Japanese study team to enter, leave and sojourn in [(C)] for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees,
(3) to exempt the members of the Japanese study team from taxes, duties and other charges on equipment, machinery and other materials brought into [(C)] for the conduct of the Study,
(4) to exempt the members of the Japanese study 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 Japanese study team for their services in connection with the implementation of the Study,
(5) to provide necessary facilities to the Japanese study team for remittance as well as utilization of the funds introduced into [(C)] from Japan in connection with the implementation of the Study,
(6) to secure permission for entry into private properties or restricted areas for the conduct of the Study,
(7) to secure permission for the Japanese study team to take all data and documents (including photographs) related to the Study out of [(C)] to Japan,
(8) to provide medical services as needed. Its expenses will be chargeable to members of the Japanese study team.

2. The Government of [(C)] shall bear claims, if any arises against members of the Japanese study team resulting from, occuring 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 wilful misconduct on the part of the members of the Japanese study team.

3. [(B)] (hereinafter reffered to as " ") shall act as counterpart agency to the Japanese study team and also as coordinating body in relation with other governmental and non-governmental organization concerned for the smooth implementation of the Study.

4. [(B)] shall, at its own expense, provide the Japanese study team with the following, in cooperation with other organization concerned:
(1) available data and information related to the Study,
(2) counterpart personnel,
(3) suitable office space with necessary equipment in (Name of Place),
(4) credentials or identification cards.

VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:
(1) to dispatch, at its own expense, study teams to [(C)],
(2) to pursue technology transfer to the [(C)] counterpart personnel in the course of the Study,
(3) to provide the following equipment and machinery for the implementation of the Study, which will remain the property of the Government of Japan unless otherwise agreed upon:

VIII. OTHERS

JICA and [(B)] shall consult with each other in respect of any matter that may arise from or in connection with the Study.

法制・行政分野

＊１．Clean Air Protection Strategy and Concept, Budapest February 1991

＊２．Legal and Institutional Framework of Air Pollution Control in Hunagary State of the Art Report, Budapest 12 April 1991

＊３．Order N0. 21／1986 (vVI. 2.) issued by the Council of Ministers in subject of protection of clean air

大気環境分野（モニタリング）

＊１．The State and Tasks of Air Pollution Control in Hungary, Budapest, 1989

＊２．Concept and Strategy of the Hungarian Background Air Pollution Monitoring

＊３．State of the Environment in Hungary and Programme for Environmental Actions, The Fifth Section of the Government Programme, launched in September 1990

＊４．Preparation of a Master Plan for Ambient Air Monitorring in Hungary (PROJECT 101／B／101C)

＊５．East Europe's Dark Dawn －The Curtain Rises to Reveal a Land Tarnished by Pollution, Nationak Geographic, June 1991

＊６．Air Pollution Monitoring Networks in Hungary

＊７．Borsod－Abauj－Zemplen Megye Kornyezeti Atlasza（シャヨ谷地域の地質、人口、土地利用、環境大気汚染等を集大成した報告書

大気汚染排出源分野

１．Traggic Volumes in Sajo Valley, Road Management and Coordinating Directorate

2.3. Szamu Melleklet a 18／1991. (XII. 18) KHVM rendelethez(自動車排ガス規制値)

３．Investigation and Improvement of Environmental Impact of the Iron and Steel Industry in Sajo River Valley, UNIDO

４．Air Quality Control Base Registration From

５．Quantity of Air Pollution Declaratin From

６．業種別課徴金（主要25社）

７．全国道路網長期開発計画

産業政策分野

1. Hungarian Industry and Trade 1980－1990, Ministry of Industry and Trade (MIT), Hungary
2. Outlines of an Industrial and Trade Policy 1991－1994, MIT1991, Hungary
3. Privatization Strategy of the Ministry of Industry and Trade, MIT, Hungary
4. Areas of Outstanding Importance of the Industry and Development Policy, MIT 1991, Hungary
5. Concept for the Steel Industry, MIT 1991, Hungary
6. Investment Guide to Hungary, MIT 1991, Hungary
7. Medium－Term Industrial and Commercial Policy, MIT 1991, Hungary
8. The Situation and Expansion of the Hungarian Telecommunication Industry **The Production and Market of Computer Technology Devices in Hungary, MIT 1991, Hungary

＊9. Expert Report on the Iitroductory Material of the DIMAG Co. Ltd. and on the Evaluation on the Company's Property Value

EC等による援助・協力分野

＊1. Project Proposals for G－24" PHARE－Environment Programme" Budapest Janualy 1990
2. European Community PHARE Envuironmental Programme, Hungary

環境広報・教育分野

1. UJ KOR－KEP 1992, Marcius（環境地域政策省の環境広報誌）
2. Information Bulletin, Regional Environmental Center for Central and Eastern Europe（環境NGO広報誌）
3. 環境保護研究所パンフレット

地理情報分野

1. 1：25,000地図（調査対象地域、全11枚）
2. ボルショド・アバウイ・ゼンプレン県地図（1：150,000）
3. ミシュコルツ市街図
4. 全国道路網図

（＊）の資料は、プロジェクト形成調査にて収集されたもの。

面会者リスト

●環境地域政策省（KTM）

○大気水質土壌保護局	局長	オトリク・ペーテル
大気保全部	部長	ラキチ・ローベルト
	主幹	イヴァーニ・ジュジャ
	主幹	ガイザーゴー・ラースロー
北ハンガリー環境保護監理局		
	局長	ガヴァッレール・イシュトヴァーン
	次長	ヤンチョー・ラースロー
	事務長	リトヴァイ・オットー
	地質学士	ヴァルガ・ペーテルネー
	情報処理	サライ・イムレ
大気保全騒音防止課		
	課長	コヴァーチ・ヨージェフ
大気保全係	係員	ビステルスキ・アンドラーシュ
	係員	オロス・ヨージェフ
実験室	室長	ピンテール・イシュトヴァーン
○国際協力情報局	局長	テーケーシュ・イシュトヴァーン
	次長	ピンテール・タマーシュ
国際協力部	課長代理	シャシュヴァーリ・アーグネシュ
○環境利用研究所（KGI）		
環境保護研究所	所長	ホルヴァート・アーグネシュ
（KVI）	主幹	エーリ・イシュトヴァーン
	化学技師	トート・イシュトヴァーン
国際計画事務所	所長	ベッゼグ・アンドラーシュ
	地質学者	ディオーセギ・アーグネシュ
○気象庁（OMSZ）		
中央大気圏物理学研究所		
管理部	部長	ザールボク・ジョルト
技術部	専門主査	トート・ローベルト

●通商産業省（IKM）

○環境利用安全技術局	主幹	ティビアーシ・ベーラーネー
環境のための工業財団		
ブダペスト工科大学		
	一般分析学学科教授	バッラ・ヨージェフ
	講師	ケーミーヴェシュ・ヨージェフ

●運輸通信水務省（KTVM）

○開発局		
技術部		ソボスライ・ミクローシュ
ミシュコルツ道路管理局		
	技術担当局長	シュトル・ガーボル
ボルショド・アバウーイ・ゼン		
プレーン県運輸監理局		
	局長	ゲレンベイ・ジョルト
○交通科学研究所		
	主査	ポラーク・イヴァーン
	機械技師	ボルシ・ゾルターン

●厚生省

○国立公衆衛生管理院（ANTSZ）		
ボルショド・アバウーイ・ゼン		
プレーン県支局	局長	シェドラーク・マーリア
公衆衛生課	課長	ボチョル・エルネー
	係長	ティターン・アルベルト
大気衛生実験室	実験室長	ナジ・フェレンツ
	分析科学士	ボクロシュ・フェレンツ
○国立公衆衛生院		
大気衛生部	部長	ケルテース・マグダ
	係長	ツィツォー・ティボル
○衛生管理庁（OTH）		セントジェルジ・イルディコー
●外務省	日本担当課長	ダブナロキ・ギュラ

●各市役所・他

○ミシュコルツ特別市市役所		
	交通組織担当役	レーヴァイ・イシュトヴァーン

	課長	エディーチ・ヨージェフ
○シャヨーセントペーテル市役所		
	市長	シャム・イシュトヴァーン
○オーズド市役所	市建築長	ショーハルミ・エミル
○カジンツィバルツィカ市役所		
	環境保護主幹	シュテファーン・フェレンツ
○ティサウーイヴァーロシュ市役所		
市運営係	責任者	ゾンボリ・イシュトヴァーン
	技術担当役	クラコダーク・ラースロー
○ボルショド火力発電所	所長	ヴィラーニ・ベーラ
	管理課長	ケルテース・マーチャーシュ
	環境保護担当主任	ハボー・ヨージェフ
○カジンツィバルツィカ		
コンクリートブロック工場		
	工場長	ガール・ミクローシュ
●EC委員会在ブダペスト代表部		
PHARE担当部長		モルテン・ユングオルセン
●USAIDハンガリー事務所		
	代表	デービット・L・コウルズ
●在ハンガリー国日本大使館		
	二等書記官	江浦　公彦

固定発生源登録及び申告の様式

OMSZÁGOS KÖRNYEZET ÉS TERMÉSZETVÉDELMI HIVATAL	Az adatgyüjtést az OKTH elnöke 77001/86 szám alatt rendelte el

Air quality control base registration form

benyújtva ..... évre

Adatszolgáltatók:
A levegő tisztaságának védelméről szóló 21/1986. (VI.2.) MT. számú rendelet végrehajtására kiadott 4/1986. (VI.2.) OKTH számú rendelkezés 7. §-ban megnevezett légszennyezők.

Name of the date source

V

K

Name of the polluter .....

.....

.....

Az adatszolgáltatás benyújtása

Pl.	Rendeltetési helye	Beérkezési határidő
3	A telephely szerint területileg illetékes elsőfokú levegőtisztaság-védelmi hatóság.	Alapbejelentésnél a keletkezésről, változásjelentésnél a változástól számított 30 napon belül, új szennyezőanyag keletkezésnél azokkal az anyagokkal kapcsolatban, amelyekre a tárgyév június 30-ig mérési szabvány lép hatályba a tárgyév végéig, egyébként a következő év végéig.
1	adatszolgáltatónál marad	

Az adatszolgáltatás kötelező!
Valótlan adatok közlése, az adatszolgáltatás megtagadása és a késedelmes adatszolgáltatás büntető, illetve szabálysértési rendelkezésekbe ütközik!

Format has ⌊_⌊_⌊_⌊_⌋ *number of pages*

Forman has ⌊_⌊_⌋ number of sketches from the spot

Kelt ....., 19 ..... hó .... n.

.....
(felelős vezető neve, beosztása)

P. H.

Elsőfokú levegőtisztaság-védelmi hatóság tölti ki!	A *Környezetvédelmi Intézet* területileg illetékes Állomása tölti ki!
Adatlap az elsőfokú hatósághoz érkezett: év hó nap ..... aláírás	Szakmai ellenőrzés utáni állásfoglalás: kitöltés megfelelő ☐ kitöltés nem megfelelő ☐ ..... aláírás

Company code	V		PM azonosítószám	K	Th ..... lap
Site code		environmental code			

site registration form

1 Telephely 1986. december 31-ig érvényes telephely kódja: |_|_|_|_|_|_|_|_|_|_|

2 Name of the site .....

Address of site /locality/ ..... postal code |_|_|_|_|

street ..... (sz. v. hrsz) ..... Pf. |_|_|_|_|

county ..... |_|_|

3 Date of site

total area (m²) |_|_|_|_|_|_|_|_|_|

area of buildings (m²) |_|_|_|_|_|_|_|_|_|

total green area (m²) |_|_|_|_|_|_|_|_|_|

pavement area (m²) |_|_|_|_|_|_|_|_|_|

water reservoir area (m²) |_|_|_|_|_|_|_|_|_|

4 Category of site

Very protected protected I. protected II.

1. 2. 3. ☐

Kelt, ... 19 ....év ..... hó ... nap

Official in charge for filling in.

Name.....

Position.....

Telephone-number.....

.....

a kitöltésért felelős ügyintéző aláírása

UNIPROP–MGKSZ Ny. (87.211)

Company code V

PM azonosítószám K

Site code

environmental code

T

..... lap

Technological registration form

1 Serial number of technology inside the site

2 Name of technology

.....

3 Code number of technology

4 A technológiához tartozó pontforrások sorszámai:

P P P P P P

P P P P P P

P P P P P P

P P P P P P

P P P P P P

P P P P P P

P P P P P P

P P P P P P

5 Products and servicies

Names	ITJ, (METJ, SZTJ) szám

UNIPROP – MGKSZ Ny. (87.049)

Company code V [ ] FM azonosítószám K [ ]

site code [ ] environmental code [ ]

L-I. ..... lap

Air polluter point source registration form

1 service number of point source P [ ]

2 serial number of point source before 1987 [ ]

3 serial number of technology [ ]

4 Name of the point source .....

5 Air pollutant/s/ emitted by the point source -

name		name	

6 Height of emission (m) [ ]

7 Diameter (m^2) [ ] , [ ]

8 Purifier connect to the point source yes 1 igen / no 2 nem [ ]

9 The purifier was built in the year of 19[ ]

10 The type of purifier

filter [ ] mechanic [ ] wet [ ]

electrostatic [ ] final gas burner [ ] other [ ] .....

11 Coptured air pollutants

Name	Code number	/net/. efficiency %
		,
		,
		,
		,
		,
		,
		,

Company code V		PM azonosítószám K		L-II	lap
Site code		environmental code			

First registration ☐ Registration of change ☐ Annual registration ☐

Air polluting building registration form

1	Building under protection inside 2o m	(1) (0) ☐
2	Serial number of point source É	3 Serial number of technology
4	Name of the building source	
5	Emission height of building source	(m)
6	Volume of inner space of the building source /m^3/	
7	Perflation per hour	$\left(\frac{1}{h}\right)$

8 The emitted air pollutants

Name	Code number	Quantity (kg/h) I. n.-év	II. n.-év	III. n.-év	IV. n.-év

9	Operating time in hours				

9/II/88. - 60000 - 807171 Petra Nyomda (Fsz.: 5-7275) - OKTH

Ára: 1 Ft

Company code V	PM azonosító sz. K	L–III	lap
Site code	environmental code		

First registration ☐ Registration of change ☐ Annual registration ☐

Surface air polluting source registration form

1	The surface source under cultivation (yes 1) (No 0) ☐
2	serial number of source F ☐☐☐
3	serial number of technology ☐☐☐☐☐
4	Name of the surface source :
5	The type of the surface source a ☐ b ☐ c ☐ d ☐ e ☐ f ☐
6	The emitted air pollutant/s/

Name	Code number	Active surface (m^2)	Operating time (h)
	☐☐☐		
	☐☐☐		
	☐☐☐		
	☐☐☐		
	☐☐☐		
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	☐☐☐		
	☐☐☐		

75/M/89. - 30000 - 907224 Patria Nyomda (Fsz.: 5-7274)

Ára: 1 FT

KÖRNYEZETVÉDELMI ÉS VÍZGAZDÁLKODÁSI MINISZTÉRIUM	Az adatgyűjtést az OKTH elnöke 77 002/86. szám alatt rendelte el.

Quantity of air pollution
declaration form for every year

Adatszolgáltatók:
A levegő tisztaságának védelméről szóló 21/1986. (VI. 2.) MT számú rendelet végrehajtására kiadott 4/1986. (VI. 2.) OKTH számú rendelkezés 9. §-ában megnevezett légszennyezők.

Name of the polluter

Statistical code:

V

K

Name of the polluter:
Name of the site:
Adress:

Az adatszolgáltatás benyújtása		
pl.	rendelési helye	beérkezési határidő
3	A telephely szerint területileg illetékes első fokú levegőtisztaság-védelmi hatóság.	Tárgyévet követő 90 napon belül
1	adatszolgáltatónál marad.	

Az adatszolgáltatás kötelező!
Valótlan adatok közlése, az adatszolgáltatás megtagadása és a késedelmes adatszolgáltatás büntető-, illetve szabálysértési rendelkezésekbe ütközik!

A jelentés _____ számozott lapot tartalmaz.

Official in charge of filling in:

Name: _____

duty: _____

Tel. _____

Kelt: _____ 19 _____ hó _____ n. _____
(felelős vezető neve, beosztása)

P. H.

Elsőfokú levegőtisztaság-védelmi hatóság tölti ki	A Környezetvédelmi Intézet területileg illetékes állomása tölti ki.
Adatlap az elsőfokú hatósághoz érkezett:	Szakmai ellenőrzés utáni állásfoglalás:
év hó n.	kitöltés megfelelő ☐
_____ aláírás	kitöltés nem megfelelő ☐
	_____ aláírás

Company code V		PM azonosítószám K		Ta	lap
Code of the settlement		OKTH environmental code			

Technology form

1	Serial number of technology		
2	Products or services		
	Item	ITJ /METJ, SZTJ/	quantity /yt
3	Operating time:		h/év
4			
	Item	ITJ /METJ, SZTJ/	qantity/yr

Company code V [ ] PM azonosító sz. K [ ]

Code of the settlement [ ] Environmental code [ ]

L–Ia

lap

Form of the air polluting source

1 Serial number of source P [ ]

2 Serial number of technology [ ]

3 Name of the source _____

4 Discherged air polluting materials

Item	Code	quantity (kg/h) I. n. év	II. n. év	III. n. év	IV. n. év

5 Operating time /h/

6 Volume of the carring gas /m^3/h/

7 Carring gas temperature /^oC/

8 Captured air polluting materials

Item	Code	quantity	treatment: return to tech.	Sale	storage	disposal	other

622/H/87. - 222 000 db - 708086 Pátria Nyomda (Fsz.: 5-7277) - OKTH

Ára: 1 Ft

ハンガリー国内委託費一覧

A．交通量調査

(1) 調査機関　MEROLDKO KFT.

(2) 調査内容　自動測定１週間＋人によるカウント３日間

(3) 委託費用　１地点につき、18000Ft＋手数料25％

B．環境保護研究所委託費

１．人件費　　4500　　USD／月／人

２．ばい煙測定

(1) 測定項目　　CO、NO_X、HC、SO_2

(2) 委託費用　　１スタック、１汚染質、１技術につき、400～750USD

３．スタックばいじん捕集および分析

１スタックにつき、750～1000USD

４．ばい煙測定・分析（詳細調査）

(1) 測定項目　　CO、NO_X、HC、SO_2、O_2、CO_2

有毒金属

HF、HCL

有毒有機質

(2) 委託費用　　１スタックにつき、5000～6250USD

５．環境大気測定

(1) 測定項目　　NO_2、SO_2、CO、SPM、有機金属（12時間測定）

(2) 委託費用　　一地点につき、1500USD