DRAFT STANDARD SUMMARY PROJECT FICHE

1. Basic information

1.1 CRIS Number: BG2003/004-937.07.03

1.2 Title:

ESTABLISHMENT OF NATIONAL QUALITY ASSURANCE AND QUALITY CONTROL SYSTEM FOR AMBIENT AIR QUALITY AND EMISSION MEASUREMENTS

1.3 Sector: **Environment**
Twinning Code: BG03/IB-EN-03

1.4 Location: **Bulgaria [Ministry of Environment and Water – Executive Environmental Agency]**

2. Objectives

2.1 Overall Objectives

Further and full implementation of EU Air Quality Legislation by improving the administrative capacity of EEA and REIs with regard to QA/QC in the National Ambient Air Monitoring System (NAAMS). The OECD Assessment carried out in 2001 emphasizes on the need of pursuance and consolidation of the work on harmonization of definitions, classifications and monitoring protocols with international standards especially for reporting under international agreements related to air pollution. The Assessment suggests also to further reinforce the QA/QC throughout the whole environmental information production chain focusing on the air quality assessment at all stages;

2.2 Project Purpose:

Establishment of QA/QC system for ambient air quality and emission measurements within NAAMS (including, further establishment and putting into operation of the EEA and REI-Varna Calibration Labs) and approval and performing of a Plan for future development of the Calibration Lab in order to cover the new AAQ parameters according to Directive 2000/69/?? on benzene and CO, Directive 2002/3/EC on tropospheric ozone (and VOCs - precursors) and the forthcoming daughter directives on PAH, Arsenic and heavy metals

2.3 Accession partnership and NPAA priority

The recently adopted Accession Partnership 2003 identifies the following priorities for environment:

- Continue transposition of the *acquis*, including secondary legislation, with particular emphasis on environmental impact assessment, access to information, waste management, industrial pollution

and risk management, nature protection, chemicals and genetically modified organisms, and nuclear safety and radiation protection. Ensure consultation with all relevant stakeholders (other ministries, economic operators, NGOs).

- Continue implementation of the *acquis* with particular emphasis on access to information, air quality, waste management, water quality, nature protection, industrial pollution and risk management as well as nuclear safety and radiation protection.
- Ensure and reinforce the administrative structures necessary for the full implementation, monitoring and enforcement of the *acquis*, in particular through further strengthening of regional inspectorates, municipalities and other public bodies at the local level, with an emphasis on water quality, industrial pollution and risk management, as well as waste management. Reinforce staffing of the Ministry and other public bodies. Ensure adequate training and staff development plans.

The project is also consistent with the NPAA:

- as regards the Horizontal legislation:

- Full implementation of the acquis communautaires relating to air quality assessment and management
- Development and further setting up of NASEM - expenses research and determination of the necessary additional equipment

- as regards the Short-term and Medium-term priorities:

- Full implementation of the acquis communautaires relating to air quality assessment and management

2.4 Contribution to the National Development Plan

NA

2.5 Cross Border Impact

NA

3. Description

3.1 Background and justification

In the current decade the Republic of Bulgaria started to enact a modern legislation for environment protection, which is being updated and harmonized with the corresponding European Union (EU) legislation. The new Environmental Protection Act was adopted in 1991 and amended in 2002.

In accordance with the new Environmental Protection Act the Ministry of Environment is in charge of organizing and conducting the monitoring of the environment components including air quality which is in great importance to the human health and sustainable development. One of the main functions of the MEW and its bodies, the EEA and 15 regional Environmental Inspections, is to collect, handle and store

air quality data and to provide the interested governmental institutions and general public with relevant information. For this purpose, EEA and REI have set up specialized structural units and laboratories. The information obtained through the air quality monitoring system is used as a basis for setting a national policy and Strategy on air quality management as well as undertaking appropriate pollution abatement measures.

Air quality monitoring has been conducted in Bulgaria since 1975. The involved institutions at national and local levels are MEW respectively EEA and REI and National Institute for Meteorology and Hydrology (NIMH) /**Appendix 1/.**

The QA/QC system is a precondition for each NAAMS. The national AAQ management policy is finally built on it.

Bulgaria has not QA/QC system for ambient air quality and emission measurements within NAAMS (including, further establishment and putting into operation of the EEA and REI-Varna Calibration Labs).

It is necessary to be developed and approved a Plan for future development of the Calibration Lab in order to cover the new AAQ parameters according to Directive 2000/69/?? on benzene and CO, Directive 2002/3/EC on tropospheric ozone (and VOCs - precursors) and the forthcoming daughter directives on PAH, Arsenic and heavy metals.

It is necessary to have a good trained EEA and REI staff, including 2 calibration Labs, laboratory experts, and operators of automatic and mobile stations.

3.2 Linked activities

The assistance provided so far by EU funds /PHARE Program/ has covered equipment supply for National Air Monitoring System /lab. equipment, equipment for stationary and mobile automatic stations/:

- Air Tender N1-1992
- Air Tender N2-1993-4
- Air Tender N3-1996
- BG 9916/11.02.01/

The supply equipment from the projects mentioned above is distributed in EEA's and REI's laboratories /**Appendix 2**/

The Phare 1999 Twinning project with BMU (BG99EN02 – Support of air quality management at local level Support) found severe shortcomings, and started to improve situation. AAQ assessment was made for the town of Pernik as well as development of improvement programs, but did not cover the specific field of QA/QC of the measurements. Recommendations in final report of the 99 Twinning project include further improvement in this field by another twinning project. Much more is needed to comply with the AAQ quality assurance requirements for measurements.

This turned out to be based on the Phare 1999 Twinning findings the biggest challenge for the future implementation of the EU Air Quality management policy and requirements [CAFE Program].

3.3 Results

1. Determination of present situation with regard to QA/QC within NAAMS i.e. to analyze the measurement methods, equipment and methodologies used; data handling, validation and verification procedures etc.; [background and emission measurements]
2. Established Calibration Lab operated on sustainable basis; ensured with adequate and well trained staff, as well as with the required methodologies
3. Established National QA/QC System for AAQ measurements within NAAMS (in compliance with EU QA/QC requirements [ISO 17025] according to art.3 of The Framework Directive 96/62/EC on AAQ assessment and management); ensured with adequate and well trained staff (station operators and REI laboratory experts), as well as with the required guidebooks, instructions and methodologies
4. Established system for monitoring of background air pollution levels and emission measurements in line with EU requirements in this field [including The EMEP Protocol under The Convention on Long Range Transboundary Air Pollution]
5. Approved measurement and calibration methodologies, as well as instructions and guidebooks [ensuring the operation of the QA/QC in general]
6. Trained staff in 15 REIs and EEA (total 50 experts) on daily analysis of data gathered and therefore, to identify without delay measurement problems and to propose remediative action
7. Trained staff in 15 REIs and EEA (total 50 experts) on basic maintenance and simple repairs of the measurement equipment
8. Trained staff in 15 REIs and EEA (total 20 experts) on QA/QC in PAH and PCDD/PCDF emission measurements or other components (according to The IPPC directive, respectively – The New Environmental Protection Act)
9. Elaborated Action Plan for further development of QA/QC System (and The Calibration Lab) in order to gradually to increase it's scope by covering the new AAQ parameters established by 2000/69/EC, 2002/3/EC and the forthcoming daughter directives (PAH, benzene, arsenic, heavy metals). The data coverage of the measurements will be significantly increased by improved maintenance, preventive measures. Thus it will comply with the respective measurement requirements of the AAQ daughter directives.

3.4 Activities

- Development of common program for training, prepared by Bulgarian and EC experts;
- To analyze in details the present situation with regard to QA/QC within NAAMS i.e. to analyze the measurement methods, equipment and methodologies used, data handling, validation and verification procedures etc., and recommendation of improvements of the QA/QC system for AAQ monitoring and emission measurements, and improvements of the QA/QC system for background monitoring;
- Based on the recommendations, to elaborate and approve the required methodologies in order to ensure the operation of the Calibration Lab, REI labs and monitoring station in accordance with the EU QA/QC requirements [ISO 17025 standards]

- Based on the recommendations to elaborate and approve the required instructions and guidebooks [to EEA, REI and municipalities (which may like to develop their own AAQ monitoring systems in the future) in order to ensure the operation of the Calibration Lab, REI labs and monitoring station in accordance with the EU QA/QC requirements [CEN 45000 standards]
- To draft an Action Plan for further development of QA/QC System (and The Calibration Lab) in order to gradually increase its scope by covering the new AAQ parameters; The Plan will include measures with regard to strengthening the EEA and REI administrations;
- To undertake on site visits in each of the 15 REIs and to train the relevant staff [and first analyze the situation]
- To carry out training for the 15 REIs/EEA on daily analysis of data gathered and therefore, to identify without delay measurement problems and to propose remediative action
- To carry out training for the REIs /EEA on basic maintenance and simple repairs of the measurement equipment
- To carry out training on QA/QC in PAH and PCDD/PCDF emission measurements or other components (according to The IPPC directive, respectively – The New Environmental Protection Act)
- To conduct 3 seminars for the 15 REIs /3 experts for each REIs /, EEA /5 experts from Air monitoring department, Air laboratory department and QA/QC department/ and Ministry of Environment and Water /3 experts from Air protection department/

- For project introduction (presentation of the work program and time-schedule);
- For QA/QC in AAQ measurements;
- For QA/QC in stack emission measurements;

3.5 Inputs

Category	Position	No. of Experts	Duration of assignment (Man-months)
PAA	QA/QC expert	1	24
Short-term	QA/QC in gas-chromatography	1	2,5
Short-term	Background monitoring expert	1	2,5
Short-term	QA/QC in emission measurements	1	5
Short-term	Data gathering and analysis	2	5
Total Man-months for the Short-term experts:			15

The twinning partner is expected to provide a team of experts having accrued at least 5 years of experience in a relevant administrative structure of a Member-State, good familiarity with EU Environmental Acquis, as well as practical experience for the required positions.

Long terms expert: the Pre Accession Advisor should have experience in QA/QC procedures in the field of environment and have at least 10 years practical experience in relevant structure.
Short term experts: experience in QA/QC in gas-chromatography, Background monitoring, QA/QC in emission measurements and data gathering and analysis are strongly required.
Ability to lead a process, communicate clearly and train staff, international practice and fluency in English, as well as proven ability to design training programmes and trainer skill are also required.

4. Institutional Framework

- The main beneficiaries of the project will be the Ministry of Environment and Water /Air protection department/, Executive Environmental Agency /Air monitoring department, Air laboratory department and QA/QC department/ and 15 Regional Inspectorates /Air monitoring departments, Air laboratory departments/.
- The Provided assets will cover all National air monitoring system /Appendix 1/
- On a National level the project will be managed by:

- Air protection directorate, MEW
- Air Quality Laboratory Department, EEA
- Air Monitoring Department, EEA

- On a National level the Project manager will be:

Mr. Nikolay Panajotov – expert in Calibration Laboratory, EEA

- The contact experts from MEW, EEA and REI are presented in Appendix 3

5. Detailed Budget

Title of the project	**PHARE Support**			**National Co-financing**	**IFI**	**TOTAL EUR**
	I	**IB**	**I+IB**			
Twinning	**-**	**550 000**	**550 000**	*****		**550 000**

* The national co-financing for the Twinning project should be up to 10 % from the State budget through the national fund.

6. Implementation Arrangements

6.1 Implementing Agency

The project is proposed for twinning.
The CFCU - Ministry of Finance of Republic of Bulgaria is the Implementing Agency (IA) for this project. The financial management of the twinning arrangements will be the responsibility of CFCU.
The Beneficiary of the project will be the Ministry of Environment and Water.

6.2 Twinning

The responsible person for twinning arrangement at the MEW is:
Ms Slavitza Dobreva
Head of European Integration Department
Ministry of Environment and Water
67, William Gladstone Str. 1000 Sofia, Bulgaria
Tel.: + 359 2 940 62 58 Fax: + 359 2 988 53 16

In her tasks, she will be assisted, for the specific project by:

Mr Valery Serafimov
Head of Air Monitoring Department
Executive Environmental Agency - MoEW
136, Tzar Boris III., 1618 Sofia, Bulgaria
Tel.: + 359 2 940 64 87 Fax: + 359 2 955 90 15

Ms Evelina Nikolova
Senior Expert
Air Monitoring Department
Executive Environmental Agency - MoEW
136, Tzar Boris III., 1618 Sofia, Bulgaria
Tel.: + 359 2 940 64 87 Fax: + 359 2 955 90 15

6.3 Non-standard aspects

Not applicable

6.4 Contracts

One contract will be implemented under twinning covenant for 550,000. The national co-financing will be contracted under the Public Procurement Law. The national co-financing will be spent for equipment and office supplies for the PAA's office, etc.

7. Implementation schedule

7.1	*Start of tendering*	January 2004
7.2	*Start of project activity*	Second half of 2004
7.3	*Project Duration*	24 months

The whole project duration is 24 calendar months. Activities are planned to start by first quarter 2004. The end of the disbursement period is planned for November 2006.

8. Equal opportunity: The twinning partner in formulation of his proposal shall ensure equal rights and opportunitis to men and women.

9. Environment: Due to the fact that the project aims to establishment of QA/QC system for ambient air quality and emission measurements within NAAMS (including, further establishment and putting into operation of the EEA and REI-Varna Calibration Labs) and approval and performing of a Plan for future development of the Calibration Lab in order to cover the new AAQ parameters according to Directive 2000/69/?? on benzene and CO, Directive 2002/3/EC on tropospheric ozone (and VOCs - precursors) and the forthcoming daughter directives on PAH, Arsenic and heavy metals

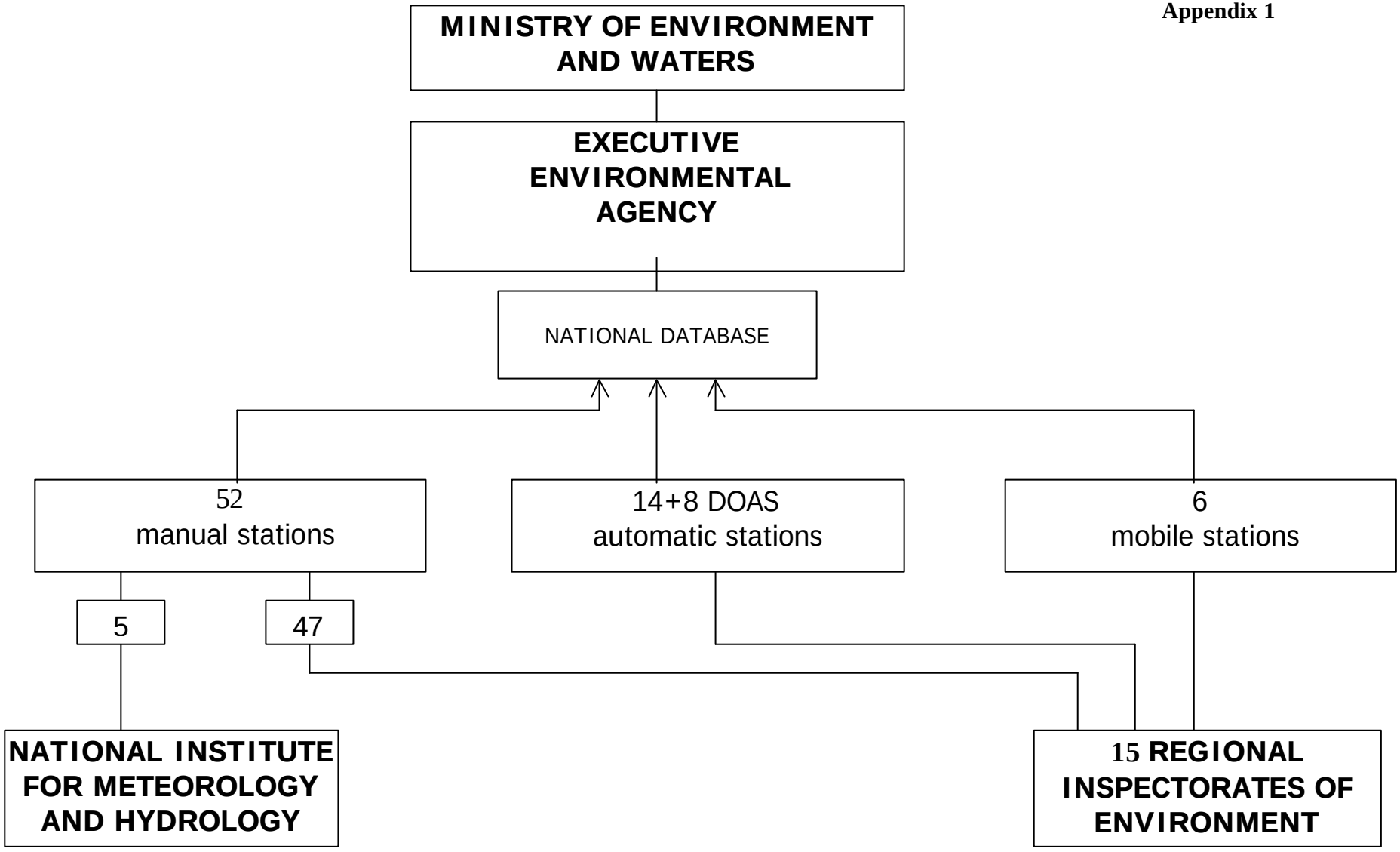
10. Rates of return: NA

11. Investment criteria: NA

12. Conditionally and sequencing:

The Bulgarian side will provide all expenses for measurements and analysis.

Appendix 1



INVOLVED INSTITUTIONS IN THE NATIONAL AIR QUALITY MONITORING SYSTEM IN 2003 YEAR

Appendix 2

Laboratories in National Air Monitoring System

EEA/REI	Ambient Air Quality Monitoring Laboratory	Emission Laboratory	Gas Chromatography Laboratory	Atomic Absorption Spectrophotometer laboratory
EEA	Yes	Yes	Yes	Yes
REI - Vratsa	Yes	Yes		
REI - Pleven	Yes	Yes	Yes	
REI - Ruse	Yes	Yes	Yes	Yes
REI - Smoljan	Yes	Yes		
REI - Burgas	Yes	Yes	Yes	Yes
REI - St.Zagora	Yes	Yes		Yes
REI - Haskovo	Yes	Yes		Yes
REI - Shumen	Yes	Yes		
REI - Plovdiv	Yes	Yes	Yes	Yes
REI - Turnovo	Yes	Yes		Yes
REI - Montana	Yes	Yes		Yes
REI - Blagoevgrad	Yes	Yes		
REI - Sofia	Yes	Yes		
REI - Pazardjik	Yes	Yes		
REI - Varna	Yes	Yes	Yes	Yes

2.Quality Assurance Laboratory

- EEA –Sofia
- REI – Varna

Appendix 3

List of contact experts from MEW, EEA and REI

MEW

Mr. Angel Kostov - Head of Air Quality department, MEW
Mr. Rosen Yordanov – expert in Air Quality department, MEW

EEA
Mr. Nikolay Panajotov – expert in Calibration Laboratory, EEA
Mrs. Sia Kalimanova - expert in Air Monitoring Department, EEA

REI

REI Vratsa
Mrs. Rumjana Mitkova – Head of Laboratory and Information Directorate
Mrs Valentina Hristova – expert in Air Quality Laboratory Department
REI Pleven
Mr. Stefan Tsanev – expert in Air Monitoring Department /Air Quality/
Mrs Nadejda Georgieva - expert in Air Monitoring Department /Emission Control/
REI Ruse
Mr. Naidemir Tsanov – expert in Air Monitoring Department /Emission Control/
Mr. Emil Nedelchev – expert, Mobile Automatic station for Air Quality
REI Smoljan
Mr. Krasimir Kondov - expert in Air Monitoring Department
Mr. Kostadin Milkotev - expert in Air Monitoring Department
REI Burgas
Mr. Dimitar Nikolov – Head of Laboratory and Information Department
Mr. Todor Valchev – Head of Environmental Control Department
REI St. Zagora
Mrs. Snejana Angelova – expert in Air Quality Laboratory Department
Mr. Stanislav Rusev - expert in Air Monitoring Department /Emission Control/
REI Haskovo
Mrs. Magdalena Boyadjieva – expert in Laboratory and Information Department
Mr. Milen Radev - expert in Laboratory and Information Department
REI Shumen
Mr. Metodi Vurbanov – Director of REI Shumen
Mrs. Nina Mihaylova – Head of Laboratory and Information Department
REI Plovdiv
Mrs. Petja Dimitrova – QA/QC expert in Laboratory and Information Department
Mr. Hristo Angelov - expert, Mobile Automatic station for Air Quality
REI V. Turnovo
Mr. Evgeni Dalev – expert in Air Monitoring Department
Mr. Nikolay Vasilev – expert in Air Quality Laboratory Department

REI Montana
Mrs Elizia Dimitrova - Head of Laboratory Department
Mrs Miglena Vulkova - expert in Air Quality Laboratory Department
REI Blagoevgrad
Mrs. Margarita Pisheva - expert in Air Monitoring Department
Mrs. Maria Angelova - expert in Air Quality Laboratory Department
REI Sofia
Expert in Air Monitoring Department
Expert in Air Quality Laboratory Department
REI Pazardjik
Mrs. Kristina Sokolova - Expert in Air Monitoring Department
Expert in Air Quality Laboratory Department
REI Varna
Expert in Air Monitoring Department
Expert in Air Quality Laboratory Department

Annex 1 : Logframe Matrix for project: BG03xx.0x ***Project Title*:** ESTABLISHMENT OF NATIONAL QUALITY ASSURANCE AND QUALITY CONTROL SYSTEM FOR AMBIENT AIR QUALITY AND EMISSION MEASUREMENTS		Contracting period expires: 31/11/2005	Disbursement period expires : 30/11/2006
		Total budget: 0.550 Meuro:	Phare budget: 0.55 Meuro
Overall objectives	**Indicators of Achievement**	**Sources of Information**	
Further implementation of EU Air Quality Legislation by improving the administrative capacity of EEA and REIs with regard to QA/QC in the National Ambient Air Monitoring System (NAAMS)	Degree of implementation of EU Air Quality Legislation	• EC Regular report for the Bulgarian progress on the accession • Annual ambient air quality reports issued by the European Environment Agency	

Project Purposes	**Indicators of Achievement**	**Sources of Information**	**Assumptions**
• Establishment of QA/QC system for ambient air quality and emission measurements within NAAMS (including, further establishment and putting into operation of the EEA and REI-Varna Calibration Labs) • Approval of a Plan for future development of the Calibration Lab in order to cover the new AAQ parameters according to Directive 2000/69/?? on benzene and CO, Directive 2002/3/EC on tropospheric ozone (and VOCs - precursors) and the forthcoming daughter directives on PAH, Arsenic and heavy metals • Ensuring sustainability of the Calibration Lab operation and the QA/QC System by training the relevant EEA and REI staff (laboratory experts, operators of automatic and mobile stations)	• Functioning QA/QC system; • Carried out analyses on the new AAQ parameters according to Directive 2000/69/?? on benzene and CO, Directive 2002/3/EC on tropospheric ozone (and VOCs - precursors) and the forthcoming daughter directives on PAH, Arsenic and heavy metals • Trained 50 persons on QA/QC and data analysis;.	Annual reporting to the European Environment Agency following the requirements of the Council Decision 97/101/EC	• Achievement of good co-operation during the implementation between the Bulgarian and twinning partners; • Fulfillment of the commitments taken by the twinning partner in terms of time schedule and project implementation; • Timely transposition and implementation of some of the Directives for air quality

• Improvement of the present systems for monitoring of background air pollution levels and emission measurements	• Defined real concentrations of air pollution for background regions;		
Results	**Indicators of Achievement**	**Sources of Information**	**Assumptions**
• Established Calibration Lab operated on sustainable basis; ensured with adequate and well trained staff, as well as with the required methodologies • Established National QA/QC System for AAQ measurements within NAAMS (in compliance with EU QA/QC requirements [ISO 17025] according to art.3 of The Framework Directive 96/62/EC on AAQ assessment and management); ensured with adequate and well trained staff (station operators and REI laboratory experts), as well as with the required guidebooks, instructions and methodologies • Established system for monitoring of background air pollution levels and emission measurements in line with EU requirements in this field [including The EMEP Protocol under The Convention on Long Range Transboundary Air Pollution] • Approved measurement and calibration methodologies, as well as instructions and guidebooks [ensuring the operation of the QA/QC in general] • Elaborated Action Plan for further development of QA/QC System (and The Calibration Lab) in order to gradually to increase it's scope by covering the new AAQ parameters established by 2000/69/EC, 2002/3/EC and the forthcoming daughter directives (PAH, benzene, arsenic, heavy metals)	• Accreditation of the calibration laboratories; • Introduction of QA/QC procedures for the laboratories' activities for air quality and emissions control;	• Issued certificates for calibration of the automated equipment for air quality; • Accredited laboratories for air quality and emissions control; • Results from ring tests at national and international levels;	• Proper implementation of the project in compliance with the Time schedule by both partners

Activities	Means	Assumptions
• To analyses in details the present situation with regard to QA/QC within NAAMS i.e to analyze the measurement methods, equipment and methodologies used; data handling, validation and verification procedures etc.; background and emission measurements] • To recommend improvements of the QA/QC system for AAQ monitoring and emission measurements; • To recommend improvements of the QA/QC system for background monitoring; • Based on the recommendations, to elaborate and approve the required methodologies in order to ensure the operation of the Calibration Lab, REI labs and monitoring station in accordance with the EU QA/QC requirements [ISO 17025 standards] • Based on the recommendations to elaborate and approve the required instructions and guidebooks [to EEA, REI and municipalities (which may like to develop their own AAQ monitoring systems in the future) in order to ensure the operation of the Calibration Lab, REI labs and monitoring station in accordance with the EU QA/QC requirements [CEN 45000 standards]	• 0.55 Meuro service contract • team adequately staffed with qualified full-time experts	• Support from other relevant institutions • Recruit and retain adequately qualified staff

• To undertake on site visits in each of the 15 REIs and to train the relevant staff [and first analyze the situation] • To carry out training for the RIOS/EEA on daily analysis of data gathered and therefore, to identify without delay measurement problems and start remediative action • To carry out training for the RIOS/EEA on basic maintenance and simple repairs of the measurement equipment • To carry out training on QA/QC in PAH and PCDD/PCDF emission measurements or other components (according to The IPPC directive, respectively – The New Environmental Protection Act) • To conduct 3 seminars: - For project introduction (presentation of the work program and time-schedule); - For QA/QC in AAQ measurements; - For QA/QC in stack emission measurements; • To draft an Action Plan for further development of QA/QC System (and The Calibration Lab) in order to gradually increase its scope by covering the new AAQ parameters; The Plan will include measures with regard to strengthening the EEA and REI administrations		
		Preconditions

Annex 2 – Detailed implementation chart

Project title : ESTABLISHMENT OF NATIONAL QUALITY ASSURANCE AND QUALITY CONTROL SYSTEM FOR AMBIENT AIR QUALITY AND EMISSION MEASUREMENTS

Components							**2004**												**2005**												**2006**											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Contract- twinning							P	T	T	T	T	C	C	C	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

P = Preparation T= Tendering C = Contracting I = Implementation

Annex 3 – Contracting and disbursement schedule by quarter

Project title: ESTABLISHMENT OF NATIONAL QUALITY ASSURANCE AND QUALITY CONTROL SYSTEM FOR AMBIENT AIR QUALITY AND EMISSION MEASUREMENTS

Components	**Cumulative contracting schedule by quarter in Meuro (planned)**														Total Phare Allocation
			2004				**2005**				**2006**				
	III	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**	**XII**	**XIII**	**XIV**	**XV**	**XVI**	
Twinning				0.550											**0.550**
Total contracting:															**0.550**

Components	**Cumulative disbursement schedule by quarter in Meuro (planned)**														Total Phare Allocation
			2004				**2005**				**2006**				
	III	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**	**XII**	**XIII**	**XIV**	**XV**	**XVI**	
Twinning							**0.165**	**0.220**	**0.275**	**0.330**	**0.385**	**0.440**	**0.495**	**0.550**	**0.550**

Total disbursement:														**0.550**

Annex 4 – Reference to feasibility /pre-feasibility studies

Project title: : ESTABLISHMENT OF NATIONAL QUALITY ASSURANCE AND QUALITY CONTROL SYSTEM FOR AMBIENT AIR QUALITY AND EMISSION MEASUREMENTS

1. Service Contract No.94-0984 with DHV – The Netherlands
   Project Title :Transboundary Pollution Romania – Bulgaria
   Final Report, October 1995

2. Project BG9916.02 Joint Air Quality Monitoring System in the Boundary Romanian – Bulgarian Towns on the Lower Danube
   Status report dd. August 2000

3. The 99 Twinning project with BMU [Support for AAQ management at local level] found severe shortcomings, and started to improve situation. But much more is needed to comply with the AAQ quality assurance requirements for measurements. Recommendations in final report of The 99 project include further improvement by another twinning project.