QUALITY ASSURANCE

MANAGEMENT PLAN

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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1.0 QUALITY ASSURANCE PROGRAM PLAN IDENTIFICATION FORM

Document Title:	Quality Assurance Management Plan; Washington State Department of Ecology
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Plan Coverage: This Quality Assurance covers all quality assurance activities required by state and federal regulations for the Air, Water, and Hazardous Waste Programs. This includes all environmental sample collection, data collection, analysis data handling, and reporting by agency sections or contractors and other governmental agencies.

CONCURRENCES

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2.0 INTRODUCTION

The Washington State Department of Ecology (WDOE) is charged with the responsibility to administer the environmental protection laws of the State of Washington. It is one goal of the WDOE to maintain and in some cases improve the quality of the environment. In order to accomplish this goal the agency must produce reliable and accurate data describing the environment and sources of pollutants to the decision makers. This data must be complete, representative, precise, accurate, and comparable to accepted standards.

The WDOE has developed and integrated Quality Assurance (QA) practices into all its monitoring and measurement activities. These QA procedures are specifically designed to generate data of known and appropriate quality in a cost effective manner.

The purpose of this document is to establish agency-wide consistency in the application of these individual QA practices. Further, it ensures that all monitoring and measurement activities funded by EPA will be conducted in accordance with EPA's monitoring and QA requirements.

This document describes the WDOE QA program plan. Its objectives are to clearly delineate the WDOE QA policy and management structure which will be used to implement the QA strategy and the QA monitoring requirements necessary to document the reliability and validity of environmental data.

3.0 QUALITY ASSURANCE POLICY

It is the policy of the WDOE that there shall be sufficient QA activities conducted within the agency to ensure that all environmental data generated and processed will be scientifically valid, of known precision and accuracy, of acceptable completeness, representativeness, and comparability, and where appropriate, legally defensible. This goal can be achieved by ensuring that adequate QA steps and procedures are used throughout the entire monitoring process (from initial study planning through data usage).

A. <u>Specifically it is the policy of WDOE that</u>:

1. All environmental data generated will be of known and acceptable quality. The data quality information developed with all environmental data will be documented and available.

2. The intended use(s) of the data will be defined before the data collection effort begins, so that appropriate QA measures may be applied to ensure a level of data quality commensurate with the monitoring objectives. The assigned level of data quality, specific QA activities, and data acceptance criteria will be explicitly described in each monitoring activity's QA project plan.

3. Quality assurance activities will be designed in the most cost-effective fashion possible without compromising data quality objectives.

4. All WDOE monitoring activities will ensure that acceptable QA requirements are included and implemented.

5. Each program which generates environmental data will develop QA project plan addressing the major elements contained in the appendix and will ensure that adequate resources (both monetary and staff) are provided to support the QA effort, and will be responsible for implementing the plan.

6. The technical and administrative authority for all QA matters withn the WDOE will be assigned to the Quality Assurance Officer (QAO). The QAO will review, comment, and concur on all Agency QA project plans. The QAO will be the focal point for interaction between EPA's Regional QA program, Agency programs, and other environmental monitoring agencies in QA related matters.

7. All applicable programs will adhere to the requirements and specifications stated in the QA program.

4.0 QUALITY ASSURANCE MANAGEMENT

The Department of Ecology is organized with five offices (Air, Water, Land, Field Operations, and Management and Budget) and an Industrial and Technical Affairs Division as shown in Figure 1. The responsibilities of these major divisions with Quality Assurance Activities are:

The Office of Air Programs has management responsibility for the laws and regulations relating to air pollution. The areas that include quality assurance activities in this office are: air monitoring, instrument calibration, stationary source testing, and data control.

The Office of Land Programs has management responsibility for the laws and regulations relating to solid waste and hazardous waste. The areas that include quality assurance activities in this office are primarily the establishment and maintenance of sampling and analysis procedures.

The Office of Water Programs has management responsibility for the laws and regulations relating to water quality and water resources. The areas that include water quality activities in this office are all located in the Water Quality Investigation section. This section has responsibility for water quality monitoring, water quality studies, and NPDES compliance monitoring.

The Office of Field Operations has responsibility in all programs as they relate to industries, municipalities, and the general public. The areas that include quality assurance activities are: NPDES compliance monitoring, complaint investigation, hazardous waste sampling and investigations, and solid waste investigations. The regional office determine that need for water quality studies and also determine how data will be used for correction or enforcement.

The Industrial and Technical Affairs Division is divided into two sections. The Industrial Section has responsibilities in all programs as they relate to the major industries. This section is essentially a fifth region that works only with the major industries and has similar quality assurance activities as the regional offices.

The Analytical Services Section consists of three laboratories and has responsibility for all chemical, biological, and microbiological analysis performed for and within the Department of Ecology. The Analytical Services Section Head is designated as the Quality Assurance Officer. The authority and responsibility for management of all quality assurance activities within the department are assigned to the Quality Assurance Officer. A quality assurance organizational structure is shown in Figure 2.

4.1 RESPONSIBILITIES

A. Responsibilities of the Quality Assurance Officer

1. The QA Officer will be the official contact for QA matters of the Department of Ecology.

2. The QA Officer will be responsible for identifying and responding to QA needs, problems, and requests from within the department.

3. The QA Officer will review and approve all Department QA project plans and all QA sections of studies or analytical services contracted outside the department.

4. The QA Officer will work with the Department, division and regional managers to take corrective action when needed.

5. The QA Officer will serve as liaison between the EPA Regional QA program, the department program, and other environmental monitoring agencies in QA related matters.

6. The QA Officer will submit QA status reports to the department management.

7. The QA officer has the responsibility for the quality assurance in the department laboratories.

B. The Responsibilities of the Program Quality Assurance Officers (Program QAO)

1. Each Program QAO is responsible for ongoing identification and coordination of the QA activities within their programs (including the program activities within the regional office), which result in the generation and/or processing of environmental data.

2. Each Program QAO will facilitate the development of QA project plans when necessary.

3. Each Program QAO will inform the QAO of new legislation or regulations which affect the QA program.

4.2 COMMUNICATION/REPORTING

A system for the dissemination of both written and oral communication relative to QA program status/needs will be developed and implemented to ensure that QA programs are effectively coordinated. The QAO and Program QAO will have direct access to the program managers or laboratory directors on specific QA matters as problems arise. The QAO will keep responsible management informed of the performance of the data-production systems and of any program problems and needs. Responsible management will in turn adequately respond to identified program problems and needs (including resource aspects) and ensure their resolution.

The QAO will prepare a QA status report each year. This report will contain at least the following types of information:

A. Status of QA plans.

B. Data quality assessments, to include:

1. Accuracy
2. Precision
3. Completeness
4. Representativeness
5. Comparability

C. Significant QA problems, corrective actions, progress, plans, and recommendations.

D. Results of performance audits.

E. Results of system audits.

F. Summary of QA-related training.

G. Other information specifically requested by WDOE management and EPA.

4.3 QA PROGRAM REVIEW AND AUDIT

The QA program will include periodic reviews and audits to ensure achievement of expressed QA objective. The nature and frequency of these reviews/audits will be determined on a project-specific basis. Generally, they shall include the following:

A. Review of Program and Project Plans

As part of the QAO's responsibility for QA program overview, all existing programs, future program plans, study/project plans, experimental designs, and external procurements will be reviewed by the QAO for adequacy, and be modified as necessary. These reviews will ensure that acceptable QA/QC activities and requirements are included, that proper QA was considered at the project's inception, and that the project will be able to produce data of the required quality in a reliable and cost-effective manner.

B. External Reviews/Audits of Performance

System and performance audits and inter-laboratory/inter-field comparison studies shall be conducted on each external (e.g., contractor laboratories) monitoring program as required by the QAO. These audits will assess the adequacy of, and adherence to, the respective QA plans.

C. Internal Review/Audit of Performance

The QAO will develop and implement a quarterly blind field spike and duplicate program when appropriate. Corrective actions will be taken and the reports submitted to appropriate program management.

5.0 GENERAL QUALITY ASSURANCE REQUIREMENTS FOR MONITORING

Adequate QA will be applied throughout the entire monitoring process to ensure that all environmental data generated and processed will be scientifically valid, defensible, of known quality, complete, representative and comparable. The QA elements which will be incorporated into monitoring activities (both internal and externally procured) by all program offices are defined in the appendix. Deviations from these QA monitoring requirements will be justified and documented. The specific requirements and level(s) of effort applicable to these QA elements will be described in individual QA project plans which will be prepared for each monitoring activity.

The QA will review all QA project plans, provide input, recommend changes, and approve final QA plans. The QAO will maintain a current file of all approved QA plans for every environmental monitoring program.

6.0 PERSONNEL QUALIFICATIONS

All QA personnel will have adequate education, training, and experience both in the area of their technical expertise and in quality assurance to meet their designated responsibilities.

All other monitoring personnel will possess adequate experience and knowledge to perform satisfactorily all technical tasks assigned.

7.0 FACILITIES, EQUIPMENT, AND SERVICES

The QA program requires that all applicable WDOE facilities, equipment, and services will be capable of producing acceptable quality data in an efficient manner with minimum risk to personnel. Specifically, the WDOE ensures provision of the following:

A. Acceptable facilities (e.g., lighting, ventilation, temperature, noise levels, etc.) in their laboratory.

B. Acceptable utility services (e.g., electricity and voltage control; purity, pressure, and supply of water and air; etc.) in their laboratory.

C. Acceptable general laboratory equipment (e.g., analytical instrumentation support, air conditioners, furnaces, generators, refrigerators, incubators, laboratory hoods, sinks, counters, etc.) in their laboratory.

D. Acceptable monitoring equipment used in the field.

E. Routine inspection and preventive maintenance will be performed for all facilities and equipment.

The above applies to any contractor receiving State/EPA funds for monitoring.

8.0 IMPLEMENTATION REQUIREMENTS AND SCHEDULE

Implementation of the WDOE QA program requires that each major milestone be identified and scheduled for accomplishment. Milestones include:

	Milestones	Dates
1.	Designation of QA officer	April 15, 1983
2.	QA program plan approved by Director	May 20, 1983
3.	QA program plan approved by EPA Region X	June 1, 1983
4.	Preparation of QA project plan	Ongoing
5.	Prepare and submit QA program status report	Ongoing

6.	Review and update of QA plan	Ongoing
7.	Participation in annual performance or system audits	Ongoing