APPENDIX K
DATA QUALITY MANAGEMENT PLAN

As discussed in Section 6.2, the department operates under its Quality Management Plan when collecting or overseeing the collection of environmental sampling data. This plan requires that:

> Each DEQ and DGLS program which generates environmental data will develop a Quality Assurance Project Plan (QAPP) following the current version of *Requirements for Quality Assurance Project Plans* (EPA QA/R-5) and will ensure that adequate resources (both monetary and staff) are provided to support the QA effort, and will be responsible for implementation of the QAPP. It will be the responsibility of the DEQ or DGLS program to ensure that QAPPs or other appropriate quality management tools are developed by any subgrantees, contractors, or, in some cases, the regulated community, who generate environmental data. For examples, sites undergoing corrective action under RCRA are typically required to have QAPPs… (pp. 3-4).
>
> And:
>
> …the Quality Management Plan (QMP) for Missouri…covers all intramural and extramural monitoring and measurement activities that generate and process environmental data for use by the MDNR-DEQ/DGLS. (p. 2).

A copy of the Quality Management Plan is available from the department or from the department's web site. EPA QA/R-5 contains further guidance on the details required to ensure data quality in field measurements. In addition, the department has developed generic QAPPs for use in project management. These generic QAPPs are also available from the department's web site.

K.1. MINIMUM SUBJECT AREAS

In order to meet the requirements of the department's Quality Management Plan, this appendix outlines the minimum subject areas that need to be addressed to meet quality assurance/quality control requirements for environmental measurement data that is collected as part of the MRBCA process. These minimum requirements include the necessary components for Work Plans submitted for department approval to conduct environment data collection and the necessary QA/QC documentation to be submitted after data collection.

I. Work Plans for Site Characterization
   - A. Sampling and Analysis Plan
   - B. Field Sampling Plan
   - C. Quality Assurance Project Plan
   - D. Health and Safety Plan

II Characterization Reports including Tier 1, Tier 2 and Tier 3 Risk Assessment Reports
   A. Field QA/QC documentation requirements
   B. Laboratory QA/QC documentation requirements

III Risk Management Plan

   If the Risk Management Plan involves environmental data collection such as further site characterization, confirmatory samples following remedial activities or monitoring then:
   A. Sampling and Analysis Plan
   B. Field Sampling Plan
   C. Quality Assurance Project Plan
   D. Documentation of the Health and Safety Plan

   If the Risk Management Plan does not involve sampling but only LTS and AUL etc. then data QA/QC would not be a component.

IV Completion of Risk Management Plan

   This is covered in Section 12 but if the Risk Management Plan involves sampling then:
   A. Field QA/QC documentation requirements
   B. Laboratory QA/QC documentation requirements

K.2. QA/QC DOCUMENTATION REQUIREMENTS

With respect to II – A. above, the following details must be considered in field QA/QC planning and documentation:

- Calibration and maintenance records for field instrumentation,
- Documentation of sample collection procedures,
- Reporting of any variances made in the field to sampling plans, SOPs or other applicable guidance documents,
- Reporting of all field analysis results,
- Documentation of sample custody (provide copies of Chain-of-Custody documents),
- Documentation of sample preservation, handling and transportation procedures,
- Documentation of field decontamination procedures (and if applicable, collection and analysis of equipment rinsate blanks),
- Collection and analysis of all required duplicate, replicate, background and trip blank samples, and
- Documentation of disposal of investigation-derived wastes.

With respect to II – B. above, laboratory analytical data must be accompanied by QA/QC sample results. The following details must be considered in laboratory QA/QC planning and documentation:

- If the published analytical method used specifies QA/QC requirements within the method, those requirements must be met and the QA/QC data reported with the sample results.
- At a minimum, QA/QC samples must consist of the following items (where applicable):
  - Method/instrument blank,
  - Extraction/digestion blank,
  - Initial calibration information,
  - Initial calibration verification,
  - Continuing calibration verification,
  - Laboratory fortified blanks/laboratory control samples,
  - Duplicates, and
  - Matrix spikes/matrix spike duplicates,
- Documentation of appropriate instrument performance data such as internal standard and surrogate recovery.