DIVISION OF ENVIRONMENT
QUALITY MANAGEMENT PLAN

PART II:

BUREAU OF WASTE MANAGEMENT
QUALITY ASSURANCE MANAGEMENT PLAN

Revision 6
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Kansas Department of Health and Environment
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Revision History (Original Version was effective (4/1/1997)

Date	Revision	Change
3/14/2003	1	Major changes to organization of document; Added data management and QMP document quality control
1/24/2005	2	Minor program updates to Section 3 and Major changes to Section 8
2/1/2005	3	Updated organizational chart
10/6/2005	4	Updated organizational chart
1/25/2011	5	Minor program updates to Section 3 and Minor changes to all sections except Section 4
2/26/2020	6	Major changes to Section 2 and 7; Minor corrections throughout document, and Updated organization chart

Section 1

INTRODUCTION

1.1 Purpose of Document

This document establishes the quality assurance (QA) goals, policies, organizational responsibilities, annual evaluation, and annual reporting requirements for environmental monitoring programs administered by the Bureau of Waste Management (BWM). It represents one of five bureau QA management plans that collectively comprise Part II of the Division of Environment Quality Management Plan (QMP).

1.2 Plan Revisions

To be effective and useable, this QA management plan must be well maintained and up-to-date. This is accomplished by reviewing the contents on an annual basis. Annual revisions are generally considered minor in nature since they are designed to reflect changes in report organization and terminology. However, major revisions that substantially change the content of the QMP may require that the entire plan be rewritten. Minor revisions to this document shall be reviewed and approved by the bureau director and bureau QA representative, in accordance with Part I, Section 4.1, Paragraph Two of the QMP.

Modifications to this plan generally will occur following the completion of the annual program evaluations in February (see Part I, Section 4.7 of QMP). However, revisions may be initiated at any time based on urgency of need or staff workload considerations. The Bureau of Waste Management shall maintain in its library an updated copy of this document, along with all program-level QA management plans and SOPs developed, implemented or administered by BWM. All approved revisions involving federally funded or mandated monitoring programs shall be submitted by the division director to the appropriate federal oversight agency.

1.3 BWM Quality Assurance Goal

The goal of this QA management plan is to ensure that all environmental monitoring activities within BWM produce data of a known and acceptable quality that support, in a scientifically defensible manner, the informational needs and regulatory functions of BWM, the Division of Environment, and the Kansas Department of Health and Environment (KDHE).

Section 2

BWM MISSION & GOALS

2.1 Mission Statement

The mission of BWM is to protect public health and environmental quality from problems associated with the generation, storage, treatment, and disposal of various forms of hazardous and solid wastes. The bureau develops technical guidance for the regulated community, conducts inspections of waste management facilities to evaluate compliance with applicable state/federal waste management laws and regulations, and initiates enforcement actions to bring violators into compliance with laws or regulations.

In addition to these regulatory activities, the bureau performs a variety of technical assistance services. Staff members conduct workshops and seminars to inform the regulated community of changes in the laws and regulations, prepare and distribute informational brochures that explain program requirements, and identify environmental services available to the private sector. Staff members also administer grant programs designed to promote the reduction, reuse or recycling of waste, and assist county governments in the revision and implementation of solid waste management plans for handling and disposal of municipal refuse.

BWM also oversees "Keep It Clean Kansas," a multi-year statewide solid waste public education and awareness program designed to influence citizen participation in local waste management programs for waste reduction, recycling, and good disposal practices.

2.2 Historical Overview

The solid waste management functions of BWM were established in 1970 by K.S.A. 65-3401 *et seq*., the Solid Waste Management Act, which provided for planning and regulation of solid waste storage, collection, transportation and disposal systems in Kansas cities and counties. The key element in the 1970 Act was the requirement that each county in the state develop a solid waste management plan, which place the counties into a role which had traditionally been assumed by the individual towns and cities. Many of these towns and cities had not taken measures to manage solid waste in an effective and environmentally safe fashion due to small populations and inadequate resources.

The Solid Waste Management Act marked the first official recognition that solid waste management was an important environmental concern in Kansas. The solid waste management systems operated by the counties were, for the most part, oriented towards the management of mixed municipal refuse. The department, in reviewing solid waste management plans and the implementation of these plans, recognized that there were significant amounts of non-municipal waste produced by commercial and industrial operations that were managed outside the traditional system by the producers of the wastes. These wastes often presented unique management problems, which indicated that they should be managed outside the traditional system of disposal in the municipal landfill, or publicly owned treatment works. In 1977, the department requested that the Kansas legislature amend the Solid Waste Management Act to provide for the

classification of certain solid wastes into a category designated as hazardous wastes. In the same year, the legislature amended K.S.A. 65-3401 *et seq*. to require that the agency secretary adopt administrative regulations governing the handling, storage, and disposal of hazardous waste and to establish criminal penalties for violations of the Solid Waste Management Act.

As part of the implementation of the Kansas Water Quality Management Plan, the 1979 Kansas legislature amended K.S.A. 65-3401 *et seq*. to broaden the authority of the Department's Secretary in relation to long-term care of hazardous waste sites. This authority was incorporated into the Solid Waste Management Act and the Act was renamed the Solid and Hazardous Waste Act. In 1981 the legislature created a new Hazardous Waste Act (K.S.A. 65-3430 *et seq*.) by extracting portions from the Solid and Hazardous Waste Act and adding new sections. The existing Solid and Hazardous Waste Act was amended to become the Solid Waste Act. Technical amendments were made to the Solid Waste Act and significant changes were also made to the Hazardous Waste Act. The result of the 1981 amendments was the formation of separate solid and hazardous waste management programs within KDHE. The revised solid waste program now functions with a separate set of administrative regulations designed primarily for long-term management of solid waste with renewed emphasis on resource recovery as a solid waste management option.

In 1984 and 1985, the legislature amended the Hazardous Waste Act to provide statutory equivalency to enable Kansas to pursue authorization from the United States Environmental Protection Agency (EPA) to operate the Resource Conservation and Recovery Act (RCRA) hazardous waste management program. In 1984 the legislature enacted a prohibition on underground burial of hazardous waste and lowered the quantity of waste at which hazardous waste generators are regulated from 100 kilograms per month to 25 kilograms per month. The 1985 legislature imposed additional statutory constraints upon the utilization of injection wells for hazardous waste disposal.

The 1986 legislature created the small quantity hazardous waste collection program (as a pilot project), amended the Hazardous Waste Act to provide equivalency with the Hazardous and Solid Waste Amendments passed by the 1984 Congress, and gave KDHE statutory authority to issue permits to commercial facilities that treat, store or dispose of polychlorinated biphenyls (PCBs). The 1989 legislature began funding a Household Hazardous Waste Program that administers a grant fund for local units of government. These grants are used to encourage cities and counties to develop household hazardous waste programs. The Department administers the grant program and oversees the collection of these wastes.

The 1990 legislature addressed the disposal of waste vehicle tires through K.S.A. 65-3424. This bill established a system of permits for waste tire processing facilities and permits for waste tire collectors and collection centers. The bill required the secretary of KDHE to establish standards for waste tire processing facilities, waste tire collection centers, and waste tire collectors. The bill also established a tax imposed on the retail sale of new tires, the proceeds of which are credited to the Waste Tire Management Fund. The bill also required the Department's Secretary to establish a grant program for cities and counties. The grants were to be used for enforcing laws relating to collection and disposal of tires, encouraging recycling of tires, developing management plans for collection, recycling, and disposal of tires, and funding the research and development for recycling and use of waste tires. K.S.A. 65-3424 was not implemented effectively during fiscal year (FY)

1991 due to technical issues in the bill as passed, and inadequate first-year resources. The law was amended during the 1991 legislative session to correct these problems and the tire program was established during FY 1992.

In 1991, EPA revised the method used by industries to determine whether wastes are classified as hazardous wastes. This change caused industries to evaluate all wastes that they generated to ensure that hazardous wastes were properly identified and managed.

The 1992 legislature passed House Bill 2801 which provided for significant changes to the existing solid waste program. Many of these changes resulted from the need to maintain consistency with federal solid waste regulations [Code of Federal Regulations (CFR) Title 40, Part 258] promulgated by EPA in August of 1991. Several of the key changes in House Bill 2801 included: redefining the local solid waste management planning process; requiring a civil and criminal background check of applicants for solid waste permits; increasing the administrative penalty authority for violations of the solid waste law from $500 to $5,000; providing the Secretary the authority to increase application and renewal fees; and establishing a solid waste tonnage fee of $1.50/ton on all solid wastes disposed on land. The latter is perhaps the most significant change of House Bill 2801. The monies generated from the tonnage fee enabled KDHE to develop a solid waste management program able to face the challenges presented by the federal Subtitle D regulations and to implement the provisions of House Bill 2801.

The 1993 legislature passed House Bill 2428, which primarily addresses two areas in the solid waste program. The bill required that KDHE report to the legislature on or before January 20th of each year any rules or regulations that exceed federal requirements. Also, any more stringent regulations adopted by KDHE cannot become effective until 45 days after the next ensuing session of the legislature. House Bill 2428 also provided much needed clarification as to the applicability of the $1.50 per ton fee on solid waste. Several wastes, which are exempt from the fee, were specifically identified in the bill. In July 1995 K.S.A. 65-3415b was amended to change the tipping fee to $1.00 per ton.

The passage of House Bill 2226 in April 1997 added “industrial waste” to definition of “reclamation facility” to encourage recycling of industrial waste materials such as waste oil filters and fluorescent lamps. This amendment to KSA 65-3402 made it clear that “industrial wastes” were not “recyclables” and processing industrial wastes to produce recyclables in the state of Kansas required a solid waste processing permit. Facilities that had once managed industrial waste as recyclables were now required to obtain a permit for those solid waste processing activities. In May 1997 the BWM published policy 97-01 to establish the annual permit renewal fee for a reclamation facility at $1000 and allow variances to the permit fee provided there is adequate demonstration that the fee diminishes the ability of a facility to operate a reclamation program.

In December 1999, a Kansas Division of Environment inter-bureau agreement between BWM, BAR, and BEFS was published in response to the USEPA’s Hazardous Waste Combustion (HWC) MACT rulemaking In September 1999. The promulgation of new federal regulations under the Title V air permitting program allow facilities to meet regulatory compliance under either program, RCRA Hazardous Waste or Title V of the clean air act. The inter-bureau agreement established guidance for coordination between BWM, BAR, and BEFS as an interim measure prior to the

adoption of 40 CFR Part 63, Subpart EEE under K.A.R. 28-19-750 by the BAR in June 1999. The BWM provided oversight for the comprehensive and confirmatory tests associated with HWC emissions, until the BAR assumed all oversight responsibilities for HWC MACT compliance standards among permitted hazardous waste burners in Kansas.

In 1999 the BWM amended K.A.R. 28-29-3 definitions and added K.A.R. 28-29-25a through K.A.R. 28-29-25f regulations for various composting activities. Regulations for small yard waste composting sites, yard waste composting facilities, manure composting, dead animal composting, source-separated composting, and solid waste composting were published to establish rules and regulations to allow composting of organic materials that would otherwise end up in Kansas landfills. The regulations establish minimal standards of operations for composting facilities to be protective of public health and the environment.

In 2000 the BWM published new household hazardous waste (HHW) regulations containing HHW management requirements for HHW collection facilities. These regulations were established to prevent the disposal of hazardous waste in Kansas solid waste landfills by requiring all HHW determined to be unsuitable for reuse, to be manifested and disposed of as hazardous waste. The requirement for manifesting also prevents the incineration of certain waste containing dioxin or dioxin forming compounds at facilities not permitted nor designed to control release of hazardous substances to the environment. The regulation establishes requirements for containment, storage, recordkeeping, and training.

In 2007 the BWM added and amended waste tire regulations to address the changes in the waste tire statutes. The statutory changes included addition of the specific definition of “beneficial use” for waste tires under K.S.A. 65-3424, requirements for mosquito control under K.S.A. 65-3424b, requirements for waste tire transporters under K.S.A. 65-3424a, and revisions to the financial assurance requirements.

In September 2009 the USEPA approved the Kansas Research, Development, and Demonstration permit program. Approval of this program allows Kansas to administer RD&D permits at municipal solid waste landfills meeting the criteria established under the federal regulations. This allowed operators of MSWLFs to request variances for the use of alternative final covers, surface water run-on controls, and liquids restrictions, as long as the alternatives are demonstrated to be equivalently effective at protecting human health and the environment.

Kansas hazardous waste permitting regulations amendments which adopt the federal rules promulgated through July 2006 were published in April 2011. Amendments to the Kansas hazardous waste permitting regulations were necessary to maintain the states authority to administer the RCRA hazardous waste permitting program and remain consistent with the federal regulations. The BWM has published state and federal regulatory adoption language that is equivalent or broader in scope than the federal rules.

In 2012 the BWM updated the solid waste regulations with amendments to the construction and demolition (C&D) landfill regulations to address hazardous and explosive gas associated with C&D landfill saturation resulting from the historically limited design and siting requirements for these types of landfills. The regulations were amended to establish minimum siting and design

standards for C&D landfills, controls for landfill contact water, and hazardous and explosive gas assessment monitoring and corrective action.

In 2013 RCRA Corrective Action authority was granted by the USEPA to KDHE to provide clean-up operation oversight of permitted or interim status RCRA Subtitle C facilities. This was accomplished through the adoption of state and federal RCRA regulations for RCRA Hazardous Waste Permitting and development of corrective action programs, policies, procedures, and guidance by BWM and the Bureau of Environmental Remediation (BER).

In October 2015 the USEPA conditionally approved the State of Kansas Coal Combustion Residuals Part 256 Plan as meeting the EPA's regulatory requirements for SWMP approval in 40 CFR Part 256. In accordance with the approved plan, the BWM finalized all CCR permit modifications on October 12, 2015 after receiving limited comment during the public comment periods on the proposed modifications to the operating permits of five coal combustion facilities in Kansas.

In August 2019 revocation of Kansas PCB regulations was finalized. Revocation of the PCB regulations was necessary as the state of Kansas repealed all PCB statutes on July 1, 2014, leaving the state no authority to continue administering the PCB program, enforce compliance, or collect penalty fees associated with non-compliance. Since July 1, 2014, the USEPA resumed the authority to administer and enforce Federal PCB regulations under the Toxic Substance Control Act (TSCA) within the state of Kansas. Observations by BWM staff of potential PCB contamination of any waste or media are referred to the USEPA for regulatory oversight.

2.3 Future Direction

Monitoring and compliance activities of Kansas hazardous waste generators and treatment, storage, and disposal (TSD) facilities will continue to be a high priority for the BWM. There are approximately 1400 generators of hazardous waste in Kansas that are routinely monitored and inspected. Routine compliance monitoring and inspections will continue to be conducted for these Kansas hazardous waste generators. Investigations and responses to complaints regarding the management of solid and hazardous waste will also continue to be conducted.

In addition to compliance, several ongoing programs continue, including groundwater monitoring assessments at landfills, household hazardous waste programs, and overseeing the waste tire management program which involves the provision of technical assistance to the regulated community. In addition, BWM staff will continue to develop the annual facility inspection program performed by the Bureau of Environmental Field Services (BEFS), and, at times, participate in, or perform inspections. To assure that facilities stay in compliance, the BWM conducts oversight of groundwater monitoring, closure, and post-closure activities at all solid waste landfills, except those landfill sites that closed prior to May 23, 2001 and oversight of corrective measures and post-closure activities continues to be performed by the Bureau of Environmental Remediation (BER).

2.4 Goals and Objectives

The primary goal of the bureau is to protect public health and maintain environmental quality by assuring proper management of hazardous and solid wastes. To achieve this goal, BWM endeavors to:

- improve compliance among regulated hazardous waste generators, transporters, TSD facilities, boilers, and industrial furnaces;

- conduct an intensive permit application review of hazardous waste TSD facilities currently operating under interim status standards pending issuance of facility permits;

- assure protection of the groundwater at hazardous waste treatment, storage, and disposal sites by performing technical evaluations of groundwater monitoring systems required and approved by KDHE or EPA;

- improve overall compliance with Kansas solid waste management statutes and administrative regulations by performing, in conjunction with the Bureau of Environmental Field Services (BEFS), monitoring inspections of regulated facilities, including municipal solid waste landfills, solid waste processing facilities, construction and demolition landfills, waste tire processor facilities, tire disposal sites, waste tire transporters, transfer stations, household hazardous waste facilities, industrial landfills, and compost facilities;

- provide timely enforcement response in those cases where administrative, civil, or criminal action is necessary;

- assure that landfill operators comply with state standards by performing reviews of operating procedures, financial assurance documents, and groundwater monitoring plans, and perform solid waste permit reviews as necessary at all solid waste landfills as required (i.e. municipal solid waste landfills, construction and demolition landfills, and industrial landfills);

- provide a timely review of tire, household hazardous waste, and solid waste planning grant applications and awards to local agencies in accordance with established priorities and procedures;

- investigate illegal dump sites and coordinate cleanup;

- provide outreach and education programs to promote public health and environmental quality;

- review and approve solid waste management plans submitted by counties and regions; and

- respond to all citizen complaints regarding improper hazardous or solid waste management in a timely manner, including follow-up inspections as appropriate.

Section 3

QUALITY ASSURANCE POLICIES & ORGANIZATION

3.1 General BWM Policies

The Bureau of Waste Management relies on environmental monitoring data to support a multitude of regulatory and administrative decisions. Accordingly, efforts to document and improve the quality of monitoring data rank among the most important functions of staff. It is the policy of BWM that all environmental monitoring activities within the bureau shall be planned and carried out in conformance with the divisional policies and procedures established in Part I of the QMP. Specifically, all monitoring activities performed within the bureau are expected to comply fully with the following policies, in addition to those specified in Sections 2.2 and 2.3, Part I of the QMP:

(1) Quality assurance (QA) and quality control (QC) shall be identifiable features of monitoring programs and be provided sufficient resources for continued operation. All QA/QC measures shall be integrated into programs in the most cost-effective manner possible without compromising data quality.

(2) All data collection activities shall be designed to provide a cost-effective balance between data quality and data production.

(3) The objectives of each environmental monitoring project shall be determined prior to implementation of data collection. This determination shall be accomplished during the planning stage of the project so that appropriate procedures will be incorporated into the design of the project and the resulting data will have a reasonable probability of meeting the stated objectives. Project-level Quality Assurance Project Plans (QAPP) shall be prepared or approved by a designated project manager prior to the implementation of environmental monitoring activities.

(4) Sample collection and analysis activities and data management activities shall be subjected to periodic evaluation by supervisory personnel and outside auditors to identify and correct deficiencies and enhance the overall credibility of the bureau's environmental monitoring programs.

(5) All data collection activities shall be accomplished and documented in accordance with divisional and bureau QA requirements and any applicable standard operating procedure (SOP), project-level QAPP, and sampling and analysis plan (SAP).

(6) All routinely used procedures shall be documented as SOPs and approved by the appropriate section chiefs, the bureau director, and the bureau representative.

(7) This bureau-level QA management plan, associated program-level QA management plans and SOPs, and project-level QAPPs and SAPs shall be

thoroughly reviewed at least annually.

(8) An adequate internal review system shall be implemented to assure that QA/QC requirements are complied with uniformly within the bureau.

(9) Deficiencies identified by review (whether performed by internal or external entities) shall be corrected as expeditiously as possible.

(10) Quality assurance and quality control policies and requirements shall be integrated into routine staff training exercises. Specific QA/QC training needs shall be identified by supervisory staff and accommodated to the fullest extent possible under prevailing budgetary constraints.

3.2 Programs and Activities Subject to Policies

The Bureau of Waste Management administers many diverse programs, ranging from waste generation, disposal, and reduction, to public education. Many of these programs generate information concerning the state of the environment or factors affecting the environment. Program activities that generate information are listed below, divided into the three primary organizational sections and two supplemental units of BWM. **Activities denoted with this symbol (*) and in bold type are subject to additional QA/QC procedures established in QMP III and applicable SOPs, QAPPs, and SAPs.**

Compliance, Assistance, & Enforcement

(1) Data collection, review, and recordkeeping from BEFS and BWM-conducted inspections;
(2) Data collection, review, and recordkeeping from generator, transporter, RCRAInfo, and hazardous waste permit reports;
(3) Complaint referral inspections and follow-ups;
(4) Oversight of BEFS-conducted inspections;
(5) Oversight of contractor/facility at BWM waste site clean-ups;
(6) Field activities performed as part of the tire site clean-up program;
(7)* Soil, water, or waste sampling during facility inspections;
(8) Training of internal and external personnel in various procedures;
(9) Fee collection and associated activities for solid and hazardous waste programs;
(10) Issuance of special waste disposal authorizations;
(11) Oversight of the illegal dump program and associated field activities;
(13) Field activities performed as part of the tire site clean-up program;
(14) Administration of grants programs for household hazardous waste projects;
(15) Oversight of BWM special waste collection events.

Solid Waste Permits Section

(1) Issuance of municipal solid waste landfill permits;
(2) Issuance of industrial landfill permits;
(3) Issuance of construction and demolition landfill permits;
(4) Issuance of waste tire monofill permits;

(5) Issuance of household hazardous waste facility permits;
(6) Issuance of composting facility permits;
(7) Issuance of solid waste processing facility permits;
(8) Oversight of groundwater monitoring activities at solid waste facilities;
(9) Oversight of groundwater contamination assessments at solid waste facilities;
(10) Management of county Solid Waste Management Plans;
(11)* Soil, water, or waste sampling during facility inspections.

Hazardous Waste Permits Section

(1) Issuance of RCRA hazardous waste treatment, storage, and disposal facility permits;
(2) Oversight of groundwater monitoring activities at hazardous waste facilities;
(3) Oversight of groundwater contamination assessments at hazardous waste facilities;
(4)* Soil, water, or waste sampling during facility inspections.

Regulations and Data

(1) Development and promulgation of regulations, policy, and guidance documents;
(2) Fee collection and associated activities for solid waste tonnage fees;

Waste Reduction Public Education/Grants

(1) Administration of grants programs for recycling projects;
(2) Organization and planning of annual conference(s);
(3) Oversight of BWM education, market development, and outreach projects;

An organizational chart illustrating BWM's current administrative hierarchy is presented in Appendix A.

3.3 Quality Assurance Responsibilities

Staff expectations and responsibilities relative to QA/QC are described in detail in the Part III of the QMP and its Appendix (Appendix A: Standard Operating Procedures). The following paragraphs briefly summarize these expectations and responsibilities.

Bureau Director - This employee ultimately oversees the development, revision, and implementation of the bureau QA management plan (Part II and III of the BWM QMP) and associated SOPS (Appendix A to QMP Part III). With the assistance of the bureau QA representative and section chiefs, the bureau director assures that QA requirements are fulfilled in the most cost-effective manner possible without hindering attainment of the stated QA objectives. The bureau director prioritizes the training and continuing educational needs of staff and develops funding proposals to accommodate these needs, as necessary.

Bureau QA Representative - This employee is directly responsible for preparation and implementation of QMPs and SOPs administered by the bureau. The bureau QA representative provides guidance to program/project managers involved in the review and approval of Project-level QAPPs and SAPs, operating under a degree of autonomy that allows for independent assessments of QA performance and the need for corrective action. The bureau QA representative

analyzes QA evaluation reports and related information submitted by section chiefs and program/project managers. This employee works with these supervisory staff and the divisional QA officer in the resolution of identified QA problem and concerns.

Section Chiefs - These employees generally are responsible for more than one environmental monitoring program/project and may supervise other, front line supervisors such as program/project managers. They oversee the QA aspects of environmental monitoring programs/projects on an ongoing basis, identify QC deficiencies within their respective programs/projects, track the QC performance of staff, and participate in the periodic review and revision of the bureau's QA management plan, SOPS, and associated Project-level QAPPs and SAPs. Section chiefs communicate often with program/project managers to assure that all applicable QA and QC requirements are correctly implemented.

Program/Project Managers and/or Unit Chiefs - Managers of environmental monitoring programs/projects work closely with non-supervisory staff as well as the section chiefs to assure QMP and SOP requirements are implemented in a timely, consistent and technically appropriate fashion. Together with the section chiefs, these managers strive to improve the efficiency of environmental monitoring operations through the prudent, day-to-day allocation of staff and other resources. They also bring the QC training needs of staff to the attention of their section chiefs, develop QMPs and SOPs for new monitoring initiatives, and periodically review and revise existing QMPs and SOPs to meet the evolving informational needs of BWM. Program/project managers and unit chiefs also review and approve Project-level QAPPs and SAPs submitted by third-party consultants on behalf of regulated entities in accordance with section 4.1.1. of DOE QMP Part I.

Non-supervisory Staff - Individuals directly involved in the collection and analysis of environmental monitoring data play an important role in the implementation of the QMP. To a large extent, the quality and usefulness of the division's environmental monitoring data reflect the willingness of these individuals to abide by approved QMPs and SOPs, and to participate constructively in the ongoing review and revision of these documents. Because they carry out the provision of QMPs and SOPs on a routine basis, non-supervisory staff members often develop a keen understanding of the technical strengths and weaknesses of the bureau's environmental monitoring operations. Program/project managers and other supervisors are expected to solicit input from these employees when developing new or revised QMPs and SOPs.

3.4 Documents and Records

The bureau QA representative shall maintain a library of all current and historical QA management plans and SOPs administered by BWM. An electronic representation of the bureau QMP and SOPs shall be maintained on the KDHE internet server in a PDF A 'read only' format and made accessible to any interested employee or outside party. The bureau QA representative is solely authorized and required to update these documents. Only changes that have been formally approved shall be made to the master copies of the bureau QA management plan and associated SOPs.

Quality control measures for retaining and archiving environmental monitoring data shall be in

accordance with all applicable state and federal records retention schedules and policies followed by the BWM. Managers of the various programs/projects in BWM are expected to evaluate data management QC performance over time and to alert their respective section chiefs and the bureau QA representatives of any serious deviations from established record management procedures or any failure to comply with established data quality control criteria.

Section 4

INTERNAL BWM QUALITY ASSURANCE DOCUMENTATION

4.1 Program Plans

Prior to implementation of any monitoring or sampling activity, all applicable program-level QA management plans and SOPs shall be reviewed by field staff to assure adherence with program/project requirements. Site-specific QAPPs will follow the format required by Part 1 (Section 4.1.1), and will also provide information and guidance on:

- program (project) goals and objectives;
- program (project) locations and points of contact;
- type of monitoring activity and duration;
- expected number and type of samples;
- sampling SOP to be followed and general collection guidelines;
- chain-of-custody requirements; and
- data management and reporting actions.

4.2 Chain-of-Custody

Samples collected by field staff shall be handled in strict accordance with the chain-of-custody procedures described in the program-level QA management plans and SOPs and project-level QAPPs and SAPs. Procedures must be meticulously followed so there can be no question as to the validity of sampling results if the monitoring data is challenged in legal proceedings.

4.3 Data Custody, Management, and Reporting

4.3.1 Data Custody

Official custody of environmental monitoring data and attendant QA/QC information shall be the responsibility of each section. All records must be made available under the Kansas Open Records Act.

4.3.2 Data Quality Management

All program-level QA management plans and project-level QAPPs shall contain provisions that assure the proper validation, transfer, storage, and backup of environmental monitoring data. Data reporting procedures shall be specifically addressed within the QA management plans, SOPs, QAPPS and accompanying SAPs. Where practicable, the plans shall provide mechanisms for reporting and permanently documenting the quantitative precision and accuracy of the data.

At a minimum, all plans must contain provisions for reporting and documenting data completeness, representativeness, and comparability in qualitative terms.

4.3.3 Data Reporting

Information derived from inspections and monitoring activities shall be reviewed for accuracy, and all final written and electronic records shall be forwarded to the appropriate section for disposition. In general, investigation/monitoring reports shall be prepared within 60 calendar days after receipt of final laboratory reports or the completion of field activities.

4.4 Standard Operating Procedures

Standard operating procedures shall be prepared for all routinely used sampling, analytical, and associated procedures as a means of establishing uniform written protocols for data collection, analytical processes, and integrating QC provisions into all routine activities. Those sections within BWM implementing monitoring activities and related functions shall be responsible for the initial preparation of the SOPs. These written procedures shall be maintained as part of the divisional and bureau QA documentation and maintained by the Bureau Quality Assurance Officer. Each SOP shall be reviewed and approved by the appropriate section chief and the bureau. To assure that QA/QC documentation is maintained in an up-to-date condition, BWM shall review all pertinent SOPs at least once each year. Revisions to any SOP must be approved by the appropriate program/project manager or section chief and the bureau director prior to implementation. Project-level SAPs shall adhere to the established SOP procedures and the specific requirements identified in any associated project-level QAPPs.

4.5 Requesting Analytical Services

Bureau staff may submit environmental samples directly to the KDHE Division of Health and Environmental Laboratories (KHEL) or contract the services of an outside laboratory. The selected laboratory must have a written QA/QC plan and be certified by KHEL. Although KHEL accommodates most of the bureau's analytical needs, the option of contracting with other laboratories enhances the scope of analytical services available to BWM.

Section 5

QUALITY ASSURANCE PROGRAM EVALUATION

5.1 Internal Review and Evaluation

The QA/QC aspects of all environmental monitoring programs are subject to ongoing review by the program managers and section chiefs. Program managers are expected to cooperate fully with administrative requests for information on data precision/accuracy and overall QC performance. Section chiefs are expected to track the QC performance of program managers, assist managers in identifying QC deficiencies within their programs, and facilitate the initiation of necessary corrective actions. The results of the QA/QC evaluations are reported to the bureau director and division director pursuant to Part I, Section 10.1 of the QMP.

5.2 External Review and Evaluation

To enhance the quality and credibility of the environmental data gathered by the bureau, all monitoring programs may be required to participate in annual QA audits performed by an independent party, such as EPA. Audit findings, and corrective actions implemented in response to such findings, are reported to the bureau director and division director.

5.3 Staff/Supervisor Performance

Position descriptions and performance evaluations are expected to accurately reflect the QA/QC functions and performances of staff. All staff involved in environmental monitoring activities are expected to carry out their responsibilities under this management plan and other applicable QA documents to the best of their abilities. Administrative staff and program managers are expected to foster an appreciation for the importance of QA/QC among nonsupervisory employees. In turn, the opinions and insights of nonsupervisory employees must be carefully considered by program managers and administrative staff. The quality and credibility of the bureau's environmental monitoring efforts ultimately depend on the willingness of all employees to work as a team, follow the requirements of the SOPs and other QA/QC documents in a diligent and consistent manner, and continually make improvements to monitoring practices and the associated QA/QC documents.

Section 6

FACILITIES, EQUIPMENT AND SERVICES

6.1 Building Operation and Maintenance

The building, which BWM currently occupies, is owned by the Topeka Public Building Commission, which holds the bonds used to pay for the building. The State of Kansas makes payments to this entity, and after the thirty-year repayment time has elapsed, the State of Kansas has an option to purchase the building for a nominal fee. Operation and maintenance of the physical facilities is the responsibility of Kansas Department of Administration, Facilities Management Division.

6.2 Maintenance of Equipment

Field equipment is utilized by individuals in the Solid Waste Permits Section, the Hazardous Waste Permits Section, and the Compliance and Enforcement, Waste Reduction & Assistance Section. Due to the limited equipment needed for groundwater sampling, field equipment used by the Solid Waste Permits Section and the Hazardous Waste Permits Section will be coordinated through the Hydrogeology Unit of the Solid Waste Permits Section. All other field equipment must be checked out by the individual user from the Compliance and Enforcement, Waste Reduction & Assistance Section. The individual users of the equipment are responsible for the care (in accordance with manufacturer's procedural manuals and/or standard operating procedures) of the equipment in the field. Users shall assure that the equipment is checked for proper operation prior to leaving for the field. Users shall record any malfunctions encountered while in the field in the logbook associated with the equipment. The appropriate point of contact must be notified of any equipment malfunction upon return from the field so appropriate action can be initiated to repair or replace the equipment.

6.3 Maintenance of Computer Equipment

The Bureau of Waste Management utilizes a variety of computer equipment including personal computers (PCs). Maintenance of the equipment, as well as technical support for computer operations within BWM, is supplied by the KDHE Office of Information Technology Services.

6.4 Procurement of Supplies and Equipment

The procurement of supplies and equipment which relate directly to the process of collection and generating environmental data (e.g., analytical instruments, sampling containers) shall include consideration of any potential effects on data quality. Particularly when procuring instrumentation, actual performance criteria and special needs must be clearly defined upon initiation of the procurement process. Although cost is certainly a major factor, the reliability, capabilities, maintainability, availability of service support, complexity, and durability of instrumentation are all important factors that should be considered in the selection process.

Section 7

QUALIFICATIONS, TRAINING AND RESOURCES

7.1 Supervisory Expectations

The quality of the bureau's environmental monitoring data is highly dependent upon staff training, experience and preparation. Section chiefs are expected to address the training needs of staff within the annual program evaluation reports. The bureau director and division director integrate this information into the budget development process. To broaden the experience level of staff, supervisors also are expected to provide occasional opportunities for any interested employee to participate in activities outside his/her daily work routine (inter-program cross-training opportunities). Such activities must be within the general scope of the employee's position description and must conform to the safety training requirements presented in this section and Section 8, below.

7.2 Qualifications

The bureau follows the policies, guidelines and regulations established by the Division of Personnel Services for hiring, evaluating and classifying personnel. These policies, guidelines and regulations establish various requirements for experience and education of personnel within the bureau. The experience and educational requirements of personnel within the bureau are outlined in the Kansas Administrative Regulations and agency classification policies.

7.3 Training

Each employee or contract employee that acquires or manages environmental data shall review parts I and II of the QMP annually and sign an affidavit stating they have read and understands these documents. Each employee or contract employee engaged in environmental sample collection will read parts I, II and III of the QMP annually, including applicable SOPs and QAPPs and shall sign an affidavit stating that they have read and understands these documents. The bureau meets the requirements of Article 8, "Training and Career Development," of the Kansas Department of Administrative Regulations by providing orientation and training to all employees. New employees are normally paired with experienced employees for orientation and initial training. Additional training is provided to employees when specifically required by the position and as the responsibilities of the employee increase. As a general policy, each employee who participates in the collection and/or generation of environmental monitoring data shall receive initial QA/QC training before generating or handling any environmental monitoring or investigation data. At no time shall a supervisor ask any employee to perform a duty that the employee has not had sufficient training and experience to complete the assignment safely and satisfactorily.

The bureau also requires certain employees to attend 40-hour hazardous waste operations (HAZWOPER) training and attend annual 8-hour refresher courses, thereafter. The highlighted positions on the organization chart in Appendix B identify these employees. Each of these employees has the requirement listed in their position description.

7.4 New Employee Orientation and Training

Supervisors, including program managers, shall assure that new employees (or recent transfers from other programs) receive thorough instruction in QA policies and procedures of the division, bureau, and program. Part I of the QMP, this document, and applicable program-level QA management plans, SOPs, and shall be required reading on the part of new employees. Apart from QA considerations, supervisors shall assure that all new employees participate in the orientation seminars offered by the KDHE Personnel Office. Newly assigned supervisors are expected to successfully complete the introductory training course for supervisors offered by the Department of Administration.

7.5 Continuing Educational Opportunities

Methods employed in the collection and analysis of environmental data are subject to continual refinement. Occasional conceptual or technological advancements may rapidly antiquate existing SOPs and require extensive training or retraining on the part of staff. Much of the continuing education opportunities are available to employees as government or industry sponsored training seminars or online webinars. Supervisors shall ensure all program staff are informed of program related advancements and training opportunities. Formal continuing educational courses offered by some colleges or vocational education institutions may be necessary to fulfill additional training needs. Costs incurred by staff participating in such courses may be reimbursable, according to KDHE policy.

7.6 Resources

Resources available to perform QA/QC functions and conduct training shall be projected on a fiscal year basis, giving consideration to the availability of resources, staff workloads, and program objectives. Section chiefs shall provide information on training needs to the bureau director for integration into the bureau budget.

Section 8

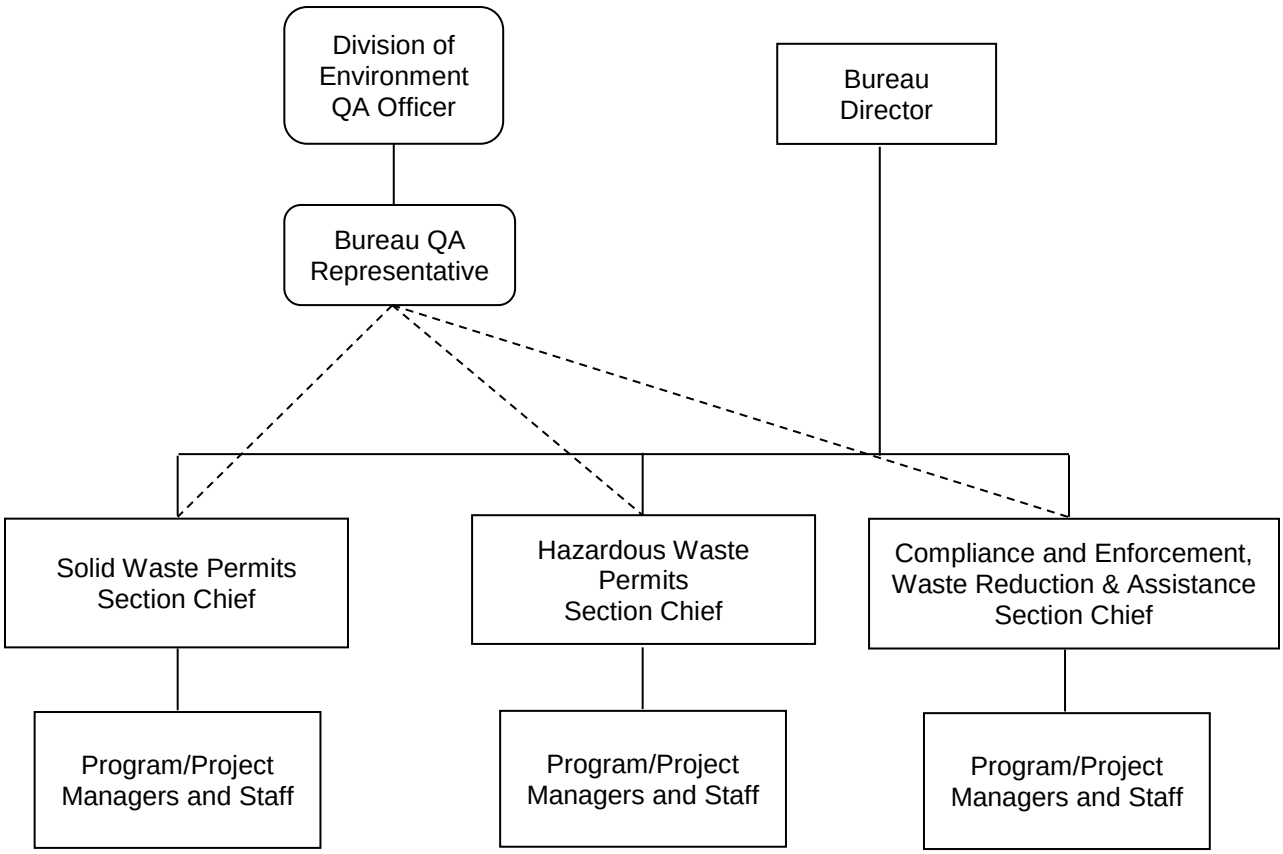
SAFETY CONSIDERATIONS

In addition to the routine possibility of automobile or equipment accidents, employees may encounter extremely slippery surfaces, toxic or hazardous substances, fire or electrocution hazards, infectious microorganisms, vicious dogs, belligerent persons, or other threatening situations. Injuries or illnesses resulting from such situations may lead to substantial human suffering and, from a QA/QC perspective, deprive monitoring programs of the services of a valuable employee for an extended period of time.

Although it is not possible to predict every conceivable risk that may arise during the course of work, supervisors and staff must review the DOE Safety Manual for appropriate safety procedures during employee training. Additionally, supervisors and staff will need to review applicable project-specific health and safety procedures prior to engaging in field activities. The staff is expected to abide by the safety protocols contained within applicable health and safety plans and to integrate safety considerations into all aspects of their work. The bureau routinely budgets for ongoing safety training expenses and annual medical examinations for field staff performing monitoring activities or field inspections involving hazardous material.

Appendix A

Bureau of Waste Management Organization Chart
For Cooperation with KDHE's Division of Environment Quality Management Plan



Appendix B
Bureau of Waste Management Positions Requiring Health and Safety Training, 40-Hour Hazardous Waste Operations Training, and Annual 8-Hour Refresher Courses
(positions highlighted in yellow)