



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

01 MAR 2017

Ms. Jaime C. Gaggero
Director, Bureau of Water
Kansas Department of Health and Environment
1000 SW Jackson, Suite 400
Topeka, Kansas 66612-1367

Dear Ms. Gaggero:

Enclosed is the Interim Final National Pollution Discharge Elimination System Permit Quality Review. The Pretreatment Section of the PQR is not included at this time, but will be sent at a later date. Once all the pretreatment concerns have been resolved, the PQR will become final. The U.S. Environmental Protection Agency has provided responses to the Kansas Department of Health and Environment's letter dated November 30, 2016, regarding the Category One findings. The EPA has included KDHE's response letter as an attachment (Appendix E) to the PQR.

- **Federal Rules require that permit applications for major POTWs include three priority pollutant scans (40 CFR § 122.21(j)(4) and 40 CFR § 122.21 appendix J).**

After review of KDHE's response to this action item (Appendix E), the EPA confirms its position that regulation requires three priority pollutant scans within a 4.5-year period.

- **Any permit issued to a CAFO must include the requirements listed in 40 CFR § 122.42(e)(1) through (e)(6)).**

The EPA has reviewed and approves the revised CAFO permit template that now includes all nutrient management requirements. The EPA will consider this action item completed upon use of this template in all future CAFO NPDES permits.

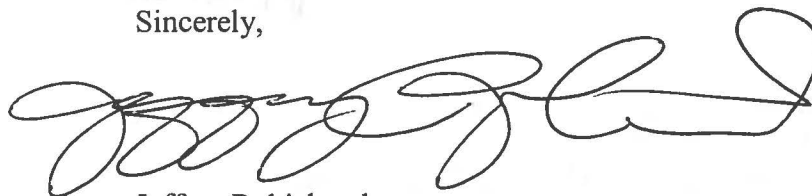
- **KDHE needs to ensure that complete applications are submitted as required (40 CFR § 122.21(a)(2).**

The EPA concurs with KDHE's decision (Appendix E) to require future permit applicants to submit the EPA Form 2C analytical table for priority pollutants.



Please convey our appreciation to your staff for their cooperation and assistance provided to us in the development of this document. If you have any questions or need additional information, please contact Donna Porter at (913) 551-7929, or porter.donna@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffery Robichaud". The signature is fluid and cursive, with a large loop at the end.

Jeffery Robichaud
Acting Director
Water, Wetlands and Pesticides Division

Enclosure

INTERIM FINAL

Region VII NPDES Permit Quality Review

Kansas

February 1, 2017

EPA, Region VII
11201 Renner Boulevard
Lenexa, KS 66219

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I. PQR BACKGROUND

National Pollutant Discharge Elimination System (NPDES) Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency, identifies successes in implementation of the NPDES program and identifies opportunities for improvement in the development of NPDES permits.

EPA's PQR review team, consisted of Donna Porter, John Dunn, Sunny Wellesley, and Mark Matthews. This team conducted the on-site review of the Kansas NPDES permitting program at the Kansas Department of Health and Environment (KDHE) in Topeka, Kansas from April 4 through 8, 2016. Kimberly Hill conducted portions of the review from Region 7's office in Lenexa, Kansas.

The Kansas PQR consisted of two components: core permit reviews and special focus area reviews. The core permit reviews concentrated on permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions. Special focus area reviews consist of national and regional issues.

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria such as the standard PQR tools and talking with permit writers regarding the permit development process. The core review focused on the Central Tenets of the NPDES Permitting program to evaluate the Kansas NPDES program. In addition, discussions between EPA and state staff addressed a range of topics including; program status (including the Memorandum of Agreement), the permitting process, responsibilities, organization, and staffing.

National focus area permit reviews are conducted to evaluate similar issues or types of permits in all states. The national topics reviewed in the Kansas NPDES program were: nutrients, pesticide general permit, pretreatment, and stormwater. Regional focus area reviews target regionally-specific permit types or particular aspects of permits. The regional topic areas selected by EPA Region 7 included: Concentrated Animal Feeding Operations (CAFOs) and Power Plant Permitting (CWA Sections 316(a) and 316(b), and the new Steam Electric effluent limitation guidelines (ELGs)). These reviews provide important information to Kansas, EPA Region 7, EPA HQs and the public on specific program areas.

A total of 21 permits were reviewed as part of the PQR. Twelve (12) permits made up the core review - of these, six (6) permits were also reviewed for regional topic areas. Permits were selected to allow EPA to address the regional categories in addition to choosing eight (8) common permits with the State Review Framework (SRF) review that occurred in conjunction with the PQR review.

II. STATE PROGRAM BACKGROUND

A. Program Structure

The State of Kansas has been authorized by the EPA to administer a program equivalent to the federal NPDES program. The EPA oversees the state permitting program and provides the national framework for the NPDES Program, including requirements for state programs. This program authorization involves permitting, inspection and enforcement activities that require varying interactions between KDHE and their regulated community.

The EPA and KDHE are in the process of revising the existing Memorandum of Agreement (MOA) between the EPA and state governing the NPDES permit and enforcement programs as part of the agency's activities under the October 15, 2009, Clean Water Act Action Plan and the Interim Guidance to Strengthen Performance in the NPDES Program (June 22, 2010). The EPA has developed guidance documents to assist in the review of the MOA. These documents, *Criteria for Reviewing MOAs*, *Checklist for Reviewing MOAs and Model MOA*, were discussed during the on-site review. The EPA Region 7 is drafting a revised MOA to present to the department and will begin negotiations to reach a final document in the very near future.

The Kansas NPDES Program in the Topeka central office is administered by four Sections in the Bureau of Water:

The Technical Services Unit provides operational surveillance of NPDES and State Non-Discharge wastewater facilities, administers a compliance and enforcement program, carries out the drinking water and wastewater operator certification program, sends and receives permit applications. This unit also develops certain permits as discussed later, public notices and issues permits for new or extended municipal, commercial and industrial wastewater permits, loads the discharge monitoring report (DMR)/Facility data to ICIS, coordinates with KDHE's Bureau of Environmental Field Services (BEFS) - the organization entity at KDHE providing field inspection, and is the primary contact for State-EPA Clean Water Act communications.

The Industrial Programs Section is responsible for permitting the handling, treatment and disposal of industrial wastewater. This section is also accountable for the pretreatment of industrial wastewater directed to municipal wastewater collection and treatment systems (although the state is not authorized for the pretreatment program through the CWA), and the quality of stormwater runoff associated with industrial or construction related activities subject to federal CWA provisions or Kansas surface water quality standards (WQSs). All permits for wastewater from drinking water facilities are written by one engineer in the Industrial Programs Section. All ready-mix concrete hybrid and hydrostatic hybrid wastewater General Permits are written by an Administrative Specialist and reviewed by an engineer. All other industrial/federal NPDES and State Non-Discharge permits are written by a shared-duty engineer, a shared-duty environmental scientist, and their supervisor in the Industrial Programs Section. Construction

stormwater general permits are written by one engineer while the industrial stormwater general permits are written by one of the shared-duty engineers in the Industrial Programs Section. Non-pretreatment city individual company pretreatment permits are written by the other shared-duty environmental scientist in the Industrial Programs Section.

The Municipal Programs Section is responsible for NPDES and State Non-Discharge permitting the treatment and disposal of municipal wastewater including municipal separate storm sewer systems (MS4s), combined sewer overflows (CSOs), and commercial entities such as mobile home parks, restaurants, and camps. Permits are written by three engineers in the Municipal Programs Section as well as two environmental technicians. The Municipal Programs Section also administers the Clean Water State Revolving Loan fund (CWSRF). The SRF fund provides financial assistance for construction of wastewater infrastructure projects at publicly-owned treatment works. State funds associated with the CWSRF are utilized in contracting for energy audits and small mechanical facility process optimization aimed at nutrient reduction.

The Livestock Waste Management Section reviews applications and issues NPDES Permits for CAFOs and state permits. By state statute, all CAFOs in Kansas are required to have an NPDES permit. Medium-sized and small Animal Feeding Operations (AFOs) facilities that have a significant pollution potential are required to apply for a state permit. This Section ensures facilities are meeting compliance with applicable statutes, regulations, and permitting requirements. The Section consists of eleven employees (not counting administrative staff) with five positions currently vacant at the time of the audit. There are nine inspectors located throughout the state at six field offices who are responsible for inspecting Large CAFOs every 18 months and State-permitted facilities once a permit cycle. The inspectors also investigate complaints associated with livestock facilities.

Each of the four Sections routinely coordinates with the Bureau of Water's Watershed Planning, Monitoring, and Assessment Section (WPMAS) in total maximum daily load (TMDL) efforts. WPMAS also provides input on permit decisions related to impaired waters and TMDLs, develops statewide surface WQSSs, and develops the Water Quality Review limits for permits.

In addition to the Bureau of Water central office staff, the Bureau of Environmental Field Services provides inspection and technical assistance activities in support of the permitting and compliance efforts from six District Offices located in Chanute, Wichita, Dodge City, Salina, Hays, and Lawrence.

The Kansas Water Pollution Control Data-Based Management System (DBMS)

Kansas uses an Oracle DBMS for primary management of the Kansas water pollution control program. The main entry screen to the Oracle DBMS provides options for permit search/data entry, inspection data entry, access to a "library," and to special reports and programs. The permit search/data entry option provides the ability to search the database for permittees via the type of permit (commercial, municipal, federal, industrial, or pretreatment), state permit number, city, county, facility name, federal permit number, KDHE district, watershed basin, and active or inactive permits. The data for each permitted facility can be accessed and updated through a set

of screens (called tabs) which include the facility data, schedule of compliance summary, various addresses, bypass and CSO information, certified operator information, outfall descriptions and locations, permit parameters and limits, inspections information, permit billing history, and the DMR pass/fail status summary. DMR data will be maintained in a separate DBMS and will be linked by another tab. The data from the state DBMS is batch uploaded nightly to ICIS-NPDES.

State process for issuing permits

One of the programs in the Oracle DBMS system is a permit tracking database used to provide the status of the permits being worked for reissuance, as well as indicate facilities due for permit re-issuance (with a 7-month lead time). Permit status tracking meetings are held at regularly scheduled times between the Technical Services unit and permit writers. The permit tracking system/checklist is a working database which uses a program to ensure all steps in the process (application, development, water quality certification, fact sheets, public notification, etc.) have been followed as well as to track the dates each step is completed. NPDES permit issuance and water quality certification of those permits falls under a single point of contact that results in a much quicker resolution of problems and more efficient permit issuance. Prior to public notification, all permits are reviewed by an experienced program manager.

KDHE issues its permits based on a 5-year watershed basis. Permits are synchronized by eleven major river basins. A major benefit of this effort is the coordination of permit issuance with TMDL implementation.

Training

Training for permit writers consists of:

- 1) Familiarization with Kansas-specific laws, regulations and policies. Each permit writer is given sufficient time to become familiar with Kansas Statutes and Regulations dealing with NPDES permitting. In addition, the permit writer must become familiar with three key documents - *Kansas Minimum Standards of Design for Water Pollution Control Facilities*, *Kansas Implementation Procedures – Wastewater Permitting* and *Kansas Implementation Procedures – Water Quality Standards*;
- 2) Mentoring by an experienced permit writer; and
- 3) Participation in the EPA Permit Writer's Workshop, when available.

New permit writers are initially given non-complex permits to develop. These consist of discharges like non-contact cooling water and municipal lagoon effluent. The work is overseen by a more experienced staffer, and ultimately reviewed for consistency with other permits by the Technical Services Unit Chief. Feedback is then provided to the permit writer. As the permit writer gains more experience, more complex permits are assigned.

B. Universe and Permit Issuance

Issuance Rate and Backlog

As of April 1, 2016, KDHE's permit database indicates a total of 1,334 facilities with individual permits that are either active or expired; 57 major facilities (48 municipals, 8 industrial, and 1 federal); and 1277 minor facilities. Currently, KDHE has a backlog of 99

(7.4%) facilities that need an individual permit. The majority of major permits are current; 48 out of 57 total or 84.2%. Kansas has no permits (major or minor) that have been expired for more than 5 years. KDHE has resolved 3 of the 7 permit objections within the last 2 years. The objections are related to SSO/wet weather issues.

The active NPDES individual permit breakdown is shown in Table 1. The KDHE also has six general NPDES permits that cover 3,824 permittees. The general permit breakdown is shown in Table 2.

Table 1

Individual Active Permits	Permits
Industrial Direct Discharge	312*
Industrial Pretreatment	56
Publicly Owned Treatment Works (municipal wastewater)	455**
Commercial (non-municipal sewage)	32
Wastewater permits for public water treatment plants	50
Federal Facilities	5
Concentrated Animal Feeding Operations	424
TOTAL	1,334

* does not include the 184 concrete ready-mix plants that are authorizations under general permits (see Table 2).

** includes the three individual MS4 Phase 1 permits.

Table 2

General Permits	Authorizations
Hydrostatic Testing	51
Construction Stormwater	2747
Small MS4 (urban area)	42
Small MS4 (outside-urban area)	19
Industrial Stormwater Activity	781
Concrete ready mix	184
TOTAL	3,824

The Kansas Water Pollution Control Permit Program administers both NPDES permits and State Non-Overflowing (Non-Discharge) permits. The State Non-Discharge permits (see Table 3) regulate water pollution control facilities that do not discharge pollutants to waters of the United States. The permits for these facilities include conditions that require land application of wastewater and sludge to be applied at agronomic rates. Proper land application of the wastewater and sludge helps ensure that any stormwater runoff (nonpoint source runoff) from the land application sites minimizes the release of any pollutants to waters of the U.S., a significant part of the December 2004 Kansas Surface Water Nutrient Reduction Plan. (See Appendix D.).

Table 3

Non-Discharge Permits	Authorizations
Commercial (non-municipal sewage)	138
Industrial	66
Municipal	273

Federal Facility	1
State Permitted Animal Feeding Operations	1,330
Certified Animal Feeding Operations (no pollution potential)	1,559
TOTAL	7,193

Priority Permits

Priority permits are drawn from a candidate list of individual and general permits that have been expired for more than two years at the beginning of the fiscal year or new facilities that have had permit applications pending for more than 2 years. The state selects 20% of the candidate permit list and commits to issuing 80% of those permits within the fiscal year. In FY14, KDHE had 80 candidate permits, committed to 23, and issued 36 permits. The FY2015 priority permit selection included 35 candidate permits, a commitment of 7 permits with 7 issued. During the current fiscal year, FY16, KDHE had 23 candidate permits, committed to issuing 5 and had issued 4 as of April 1, 2016. The vast majority of priority permits are associated with CAFOs due to the difficulty of developing and receiving approvable nutrient management plans from the permittee that are required as part of the permit.

Permit Development

KDHE uses its own application forms, which are based on the EPA's forms. The Oracle DBMS system that Kansas uses tracks the status of the permits being worked for reissuance, as well as indicates facilities due for permit re-issuance (with a 7-month lead time). KDHE uses the DBMS System to check the application information including the facility data, schedule of compliance summary, various addresses, bypass and CSO information, certified operator information, outfall descriptions and locations, permit parameters and limits, inspections information, permit billing history, and the DMR pass/fail status summary. DMR data are maintained in a separate DBMS and provide the permit writer a summary of the discharge data during the prior permit cycle.

KDHE uses DMRs to assess discharge levels of pollutants. KDHE uses the federal 2C form, but does not always require monitoring of the more obscure pollutants that are required for various SIC codes in the 2C form.

The KDHE policies on permit development are described in detail in the 2014 Document: Kansas Implementation Procedures, Wastewater (Appendix B). This document details many aspects of permitting decisions: mixing zones, low flows, background assumptions, reasonable potential, etc. In addition, some methodologies are set in rule at K.A.R. 28-16-28(b)-(f). (Appendix C)

Water Quality-based Effluent Limits

KDHE calculates water quality-based effluent limitations using the procedures found in the Kansas Implementation Procedures, K.A.R 28-16-28, and the Technical Support Document for Water Quality-Based Toxics Control (TSD) [EPA/505/2-90-00].

The Kansas Implementation Procedures set the rules on all aspects of water quality-based permitting including low flows used in calculations, mixing zones and use of CORMIX

modeling, background pollutant assumptions, limit derivation, whole effluent toxicity (WET) policy, etc.

All Kansas individual NPDES permit applications go through a water quality review prior to the draft permit being developed. The following information is reviewed during the water quality review: information provided by the permit writer, information available from previous water quality reviews (if any), receiving stream characteristics, classification and designated uses, and TMDL and waste load allocation (WLA). All permits include "mapping" of stream reaches and designated uses. Applicable information is entered into various models used to calculate water quality based limits pursuant to the Kansas Surface Water Quality Standards, as adopted in Kansas Administrative Regulations, and the Kansas Implementation Procedures. The calculated water quality based permit limits are compared to technology based limits, TMDL and WLA, as appropriate, and the stricter of the limits are used to draft the permit.

In practice, it appears that permit writers include limits for all Pollutants of Concern. Pollutants of Concern are identified by pollutant scans, TMDLs, or effluent guidelines. The permit writer also makes a determination to include a limit or require monitoring for parameters not limited by other criteria based upon a calculation of the reasonable potential for the discharge to exceed WQSS. The permit writer determines if limits based upon effluent guidelines are appropriate. The permit writer details permit limitations and the basis of derivation in the statement of basis/fact sheet.

Kansas uses a geo-mean approach for assessing reasonable potential (see Kansas Implementation Procedures, page 27). A geo-mean of data is used as an indication of a long term average (LTA). A multiplier of the LTA is then used to assess the 95% maximum level, which is compared to the WLA. EPA has not supported that approach because the averaging approach can make a finding of no reasonable potential, even though one or more of the average values exceeds the WLA.

KDHE includes WET limits (Acute or Chronic as applicable) in all major permits and in key minor permits. The state assumes reasonable potential and sets limits at the value of the calculated WET waste load allocation.

Ammonia limits are calculated on a monthly basis with a default assumption of background values. Permit Daily Maximum Limits were set based on the Acute Waste Load Allocation. Monthly Average Limits are set based on the Chronic Waste Load Allocation. This is different from the methodology of the TSD.

TMDLs

Limits for discharges to impaired waters without a TMDL are calculated in one of two ways: 1) as the concentration-based water quality criterion being met at the end of the discharge pipe with no mixing zone; or 2) limits are established based on the best professional judgment (BPJ) of the permit writer until such time the TMDL is completed. In the latter case, a re-opener clause is placed in the permit to reopen the permit and establish new limits once the TMDL is completed

and approved by EPA. The choice made for establishing limits is dependent on the technology needed to provide treatment and the cost of that technology.

To insure that permits incorporate WLA requirements in TMDLs, the state uses a standardized form by Water Quality Certification staff to establish basic background information regarding the point of discharge. The form requires that an affirmative statement be made as to whether a discharge is located on a 303(d)-listed stream segment. If it is, the TMDL implementation plan is reviewed and limits established by the TMDL are placed in the Water Quality Certification, which is provided to the permit writer.

Translation of the WLA into permit limits is dependent on whether the pollutant in question is mass-limited (e.g., a nutrient), or concentration-limited (e.g., a toxic). A mass-based pollutant limit can be incorporated directly from the TMDL. A concentration-based pollutant limit is calculated based on the load specified in the TMDL and the average daily flow of the permitted facility. A check is made to verify the calculated concentration limit does not exceed the water-quality based limit (WQBEL).

C. State-Specific Challenges

The current federal CAFO rules permit transfer of manure from a regulated CAFO to another entity, thereby limiting the CAFO's responsibility for complying with manure management requirements. As a result, most Kansas CAFOs are transferring considerable amounts of manure that can then be applied in a less controlled manner and potentially pollute surface waters.

D. Current State Initiatives

KDHE has been implementing a Surface Water Nutrient Reduction Plan where major publicly owned treatment works (POTWs) are being required to optimize treatment for nutrient capture. About 85% of the point source discharges of wastewater are treated in facilities 1 million gallons per day (MGD) or larger, so there is an economy of scale in technology-based controls.

Kansas has been very successful in getting voluntary nutrient reduction. As of 2015, 75% of the strategy's targeted facilities (48 major municipal facilities) have nitrification/denitrification installed, while 60% have some type of phosphorus reduction installed. Kansas has seen the median TN discharged by these facilities drop to 9.43 mg/L and the median TP drop to 1.99 mg/L. This represents significant reduction since 2004. Although not all facilities will meet the reduction targets by 2019, the numbers are expected to continue to drop with several facilities upgrading prior to 2019.

Kansas has many lagoon facilities serving small communities with an average size of 350 people. Lagoons operate by gravity and require very little operational controls. Currently, the state has found no other technology that could serve dependably in these small and remote applications. Some studies have found that well operated lagoons generally produce a high quality discharge for most pollutant parameters, but are not capable of meeting stringent ammonia limits. KDHE is preparing a Multiple Discharger Variance (MDV), which will be submitted for review and approval by the EPA as a change to WQSs. The first application of MDV would be an ammonia variance for up to 20 years for a discreet list of very small

municipal lagoon systems, with a requirement to implement appropriate best management practices (BMPs) until such time as an affordable treatment technology becomes available.

III. CORE REVIEW FINDINGS

Core Permits Reviewed (see Appendix A for details):

POTW	
KS0038962	Garden City WWTP
KS0085693	Ellsworth WWTP
KS0097560	Parsons WWTP
KS0051641	Alden WWTP
KS0116882	Hill City WWTP (non-discharging)
KS0095681	Wichita #3 WWTP
Industrial	
KS0000761	Frontier El Dorado Refining, LLC
KS0003204	Innovia Films, Inc.
KS0080942	BPU-Quindaro Power Station
KS0080071	LaCyne Generating Station
KS0094706	Creekstone Farms Premium Beef, LLC
KS0100749	Prairie Horizon Ethanol

A. Basic Facility Information and Permit Application

1. Facility Information

Basic facility information is necessary to properly establish permit conditions. For example, information regarding facility type, location, processes and other factors are required by NPDES permit application regulations (40 CFR 122.21). This information is essential for developing technically sound, complete, clear and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

On all permits and fact sheets reviewed, the descriptions of the facility type, location, receiving stream, and facility discharge were complete. The cover page of the permit had a detailed latitude/longitude for each outfall. The standard boilerplate language of the cover sheet of the permit was complete and well written. The fact sheet templates had separate sections that stated the proposed action, existing permit, existing facility description, any proposed changes/expansions, receiving stream, and proposed limits.

2. Permit Application Requirements

Federal regulations at 40 CFR 122.21 and 122.22 specify application requirements for permittees seeking NPDES permits. Although federal forms are available, authorized states may use their own forms provided they include all information required by the federal regulations. This portion of the review assesses whether appropriate, complete, and timely application information was received by the state and used in permit development.

KDHE uses its own application forms, which are based on the EPA's forms. The Oracle DBMS system that Kansas uses tracks the status of the permits being worked for reissuance, as well as

indicates facilities with expiring permits (with a 7-month lead time). The permit applications reviewed were received in a timely manner and provided the basic facility information, but were sometimes incomplete. Follow-up with permittee was necessary to complete application. KDHE uses the DBMS System to check the application information, including the facility data, schedule of compliance summary, various addresses, bypass and CSO information, certified operator information, outfall descriptions and locations, permit parameters and limits, inspections information, permit billing history, and the DMR pass/fail status summary. DMR data are maintained in a separate DBMS and provide the permit writer a summary of the discharge data during the prior permit cycle. Files for POTWs and industrial discharge facilities contained printouts of DMRs, for the permit writer's review.

Applications for POTWs included a confirmation of responsible parties and a facility description, but did not include a summary of discharge data as KDHE uses DMRs to review that data. Major POTWs are required to do one Priority Pollutant scan during the five year permit term, however Federal Rules require that permit applications for major POTWs include three priority pollutant scans (40 CFR 122.21(j)(4) and 40 CFR 122.21, Appendix J). Annual WET testing (with enforceable limits) is included in all permits for major POTWs.

Two of the Industrial Dischargers did not include data from past permit monitoring in their application. The BPU-Quindaro Power Station permit application did not submit the more detailed monitoring required in the federal 2C permit application forms. Although KDHE maintains DMR data, KDHE needs to insure that complete applications are submitted for all facilities.

Finding:

- **Federal Rules require that permit applications for major POTWs include three priority pollutant scans (40 CFR 122.21(j)(4) and 40 CFR 122.21 appendix J).**
- **KDHE needs to insure that complete applications are submitted as required (40 CFR 122.21(a)(2))**

B. Technology-based Effluent Limitations

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology-based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

1. TBELs for POTWs

POTWs must meet secondary or equivalent to secondary standards (including limits for BOD, TSS, pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of 6 POTW permits were reviewed as part of the PQR.

The EPA's review found that KDHE is appropriately establishing technology-based permit limits for POTWs: all permits reviewed contained all parameters required by 40 CFR Part 133. The

Kansas Implementation Procedures define how TBELs for POTWs will be calculated, and the procedures are the same as the requirements of 40 CFR Part 133.

All TBELs for POTWs were calculated correctly and expressed in appropriate units. POTW limits included Weekly Averages and Daily Maximums, appropriate percent removals, and pH limits. KDHE does not calculate mass based limits for BOD and TSS. Federal rules encourage, but do not require, calculation of mass limits.

2. TBELs for Non-POTW Dischargers

Permits issued to non-POTWs must require compliance with a level of treatment performance equivalent to Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT) for existing sources, and consistent with New Source Performance Standards (NSPS) for new sources. Where federal ELGs have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case using BPJ in accordance with the criteria outlined at 40 CFR 125.3(d).

Permits for industrial facilities included limits for all parameters defined in the applicable ELG and were expressed in Monthly Averages and Daily Maximums in the units required in the ELG. All TBELs for industrial facilities were calculated correctly and expressed in appropriate units. Industrial limits included all parameters defined in the ELG. Innovia Films manufactures cellophane and is not covered by an effluent guideline, so TBELs were derived by BPJ. The BPJ technology-based limits were based on existing limits and Historical Effluent Performance Data (HEPD). It was not apparent that the basis for the original BPJ determination was reviewed when determining monitoring/effluent limits for the new permit as required under 40 CFR 125.3(c)(3).

While most TBELs were fairly straight-forward, the refinery effluent guideline (40 CFR Part 419, Subpart B) for Frontier El Dorado required spreadsheets that showed the weighted allocations for multiples processes and industrial stormwater from the site. The calculations were done correctly. The fact sheet indicated that KDHE had granted a monitoring waiver from the effluent guideline based limits for total and hexavalent chromium. The regulatory authority for the waiver was cited in the permit correctly (40 CFR 122.44 (a)(2)(iv)), although the fact sheet incorrectly indicated that the monitoring waiver for this permit was granted due to no reasonable potential.

C. Water Quality-Based Effluent Limitations

The NPDES regulations at 40 CFR 122.44(d) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state WQSs, including narrative criteria for water quality. To establish such WQBELs, the permitting authority must evaluate the proposed discharge and determine whether technology-based requirements are sufficiently stringent, and whether any pollutants or pollutant parameters could cause or contribute to an excursion above any applicable WQS.

Each core permit reviewed had a Water Quality Review Memorandum completed by the Watershed Planning, Monitoring and Assessment Section. The section reviews all data to make

sure the permit complies with WQS. An ammonia, WET, and BOD permit limit worksheet is attached to every Memorandum. The ammonia limits are calculated on a monthly basis with a default assumption of background values. Permit Daily Maximum Limits are set based on the Acute WLA. Monthly Average limits are set based on the Chronic WLA. This is different from the methodology of the TSD.

Most of the POTW permits reviewed had water-quality based limits for ammonia, E.coli, and WET; some had water-quality based limits for BOD. The POTW permits also had narrative criteria stating there will be no discharge of floating solids or visible foam other than in trace amounts.

WQBELs were also included in permits where there were impairments or TMDLs. In the Innovia Films permit, KDHE had taken extra precautions when setting WQBELs in the Kansas River near Topeka. In that section of the Kansas River, the river is very wide and shallow, so shoreline discharges do not easily gain mixing into the larger waterbody. This creates a “shore hugging” plume. KDHE used CORMIX modeling for several facilities to ensure the WQSS were met for the mixing zone requirements of Kansas standards, this resulted in tighter permit limits for those facilities.

TMDLs

Section 303(d) of the CWA requires states to identify and establish a priority ranking for waters not attaining WQSS despite implementation of technology-based effluent requirements. For these priority waters, the states must establish TMDLs for pollutants causing impairments.

In the three permits reviewed, 303(d) listings and the causes for the impairment were documented. The permits with applicable TMDLs also documented the pollutant parameters addressed by the TMDL. Permit writers considered all limited parameters and included each parameter in the permit. Both North Topeka and Wichita #3 WWTF discharge to streams that have a TMDL written for E. coli. In those permits, end of pipe limits were placed in the permit that met the TMDL.

D. Monitoring and Reporting

NPDES regulations at 40 CFR 122.41(j) require permittees to periodically evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and where applicable, internal processes, and report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at minimum, annual monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48 requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity. The regulations at 40 CFR 122.44(i) also require

reporting of monitoring results with a frequency dependent on the nature and effect of the discharge.

The KDHE implementation process is highly standardized for routine parameters, with the suggested monitoring frequency for mechanical plants and large lagoons based on the average daily design flow (see Appendix B, page 19). The permit writer can use BPJ to appropriately increase or decrease the monitoring frequency based on a number of factors listed in the Kansas Implementation Procedures, such as the historical performance based on DMR date for the treatment facility. For example, the Garden City WWTF has an average daily design flow of 6.0 MGD which would require a monitoring frequency of four times monthly, but the facility sends 80% of its effluent to irrigate croplands or to local power plants to be re-used as process cooling water. Therefore, the permitted monitoring frequency is twice monthly.

For POTWs, KDHE is including monitoring for all TBEL parameters as required by the Secondary Treatment Requirements of 40 CFR Part 133, including the influent monitoring required to calculate percent removal. For non-POTWs, KDHE included monitoring for all parameters covered in the applicable ELG or identified as needing a TBEL through the BPJ process. When the need for WQBEL was found, limits and monitoring were present in the permit.

Monitoring for influent flow data was not consistent. The Ellsworth WWTF was the only facility that monitored inflow data of the permits reviewed, but it was noted that Alden WWTF had inflow and infiltration (I&I) issues. Influent flow data is highly recommended for the design of upgrades, evaluation of I&I of the collection system, and overall operation of a treatment system. The design of upgrades to an existing lagoon system and/or for a mechanical plant replacement cannot be completed without an understanding of the hydraulic and organic loading characteristics of the system. Influent monitoring will also allow for observation of peak flows, in both frequency and amplitude, associated with I&I from the collection system.

Permits reviewed cited 40 CFR Part 136 methods and appropriate methods for WET testing. KDHE requires that labs be accredited for all types of NPDES testing; this assures that all testing is standardized and labs use appropriate methods.

KDHE uses DMRs to provide the monitoring data required for a permit application. The rules in 40 CFR 122.21 allow this, so long as the permit writer has all the monitoring data required in the rules. Unfortunately, the monitoring required by the permit does not address all permit application monitoring requirements in 40 CFR 122.21. Specifically missing are three priority pollutant scans for POTWs and SIC specific monitoring requirements that are specified in the federal form 2C for non-POTWs.

KDHE has started incorporating electronic reporting requirements into permits. KDHE has five years to begin electronically collecting, managing, and sharing information that includes: general permit reports (e.g., Notice of Intent to be covered (NOI); CAFO Annual Program Reports; MS4 Program Reports; and all other remaining NPDES program reports).

E. Standard and Special Conditions

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain an enumerated list of “standard” permit conditions. Further, the regulations at 40 CFR 122.42 require that NPDES permits for certain categories of dischargers must contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and may not alter or omit any standard condition, unless such alteration or omission results in a requirement more stringent than required by the federal regulations.

In addition to standard permit conditions, permits may also contain additional requirements that are unique to a particular permittee or discharger. These case-specific requirements are generally referred to as “special conditions.” Special conditions might include requirements such as: additional monitoring or special studies such as pollutant management plan or a mercury minimization plan; BMPs (40 CFR 122.44(k)), or permit compliance schedules (40 CFR 122.47). Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

In the 2007 Permit Program Review, EPA recommended that KDHE evaluate its Standard Conditions to ensure that they are as stringent as the federal regulations. In 2010, KDHE revised the standard conditions to meet the federal regulations. All core permits reviewed included the revised standard conditions. EPA found no further changes or recommendations are needed regarding standard permit conditions.

Special Conditions were included in permits, as needed, including compliance schedules, sludge requirements, and other facility specific requirements. Nutrient goals for Total Nitrogen and Total Phosphorus are listed under the special conditions for major WWTFs as specified in the Surface Water Nutrient Reduction Plan. WET follow up procedures are described in the Kansas Implementation Procedures and these are included in Special Conditions.

F. Administrative Process

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6); coordinating EPA and state review of the draft or proposed permit (40 CFR 123.44); providing public notice (40 CFR 124.10); conducting hearings if appropriate (40 CFR 124.11 and 40 CFR 124.12); responding to public comments (40 CFR 124.17); and modifying a permit (if necessary), after issuance (40 CFR 124.5). EPA discussed each element of the administrative process with Kansas, and reviewed materials from the administrative process as they related to the core permit review.

KDHE has implemented the permit administrative process as required. KDHE has used a standardized approach that assures an efficient administrative process. Permittees are contacted early so that applications are on time, and the process of getting a draft permit to public notice and re-issued is orderly.

A public notice announcement listing the name, address, legal description, and receiving water of the facility as well as a brief summary of the permit is placed in the Kansas Register. Public notices of state-wide concerns are published in the Kansas Register and major daily newspapers across the state. Regional and local issues are public noticed in the Kansas Register, regional, local daily and/or weekly newspapers based upon circulation of the newspaper and/or status as the official newspaper for the entity.

KDHE does not have a permit database that can be accessed by the public on its website. Pursuant to the Kansas Open Records Act (KORA - K.S.A. 45-220(c)), public officials/agency may only grant access to public records or information containing names and addresses to a person who has made a written request for access to such information. Currently, all facility information is stored at the Central Office.

Overall, KDHE has submitted permit related information to EPA in a timely manner as agreed to in the Performance Partnership Grant (PPG). Once a week, KDHE e-mails EPA the list of draft water pollution control permits on public notice. KDHE also sends EPA notices of public hearings. As agreed to in the PPG and the MOA, KDHE sends EPA copies of all draft permits for major facilities, as well as the facts sheets and other supporting documentation, such as the water-quality certification and DMR data used in determining permit and monitoring requirements. As agreed to in the MOA, EPA has 30 days to review and comment and/or initiate the objection process on the draft permit. Upon request, KDHE will send a copy of any minor permit to EPA electronically.

G. Administrative Record

The administrative record is the foundation that supports the NPDES permit. If EPA issues the permit, 40 CFR 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR 124.18 identifies the requirements for a final permit. Authorized state programs must have equivalent documentation. The record must contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit must contain the permit application and supporting data; draft permit; fact sheet or statement of basis; all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

Current regulations require that fact sheets include information regarding the type of facility or activity permitted, the type and quantity of pollutants discharged, the technical, statutory, and regulatory basis for permit conditions, the basis and calculations for effluent limits and conditions, the reasons for application of certain specific limits, rationales for variances or alternatives, contact information, and procedures for issuing the final permit. Generally, the administrative record includes the permit application, the draft permit, any fact sheet or statement of basis, documents cited in the fact sheet or statement of basis, and other documents contained in the supporting file for the permit.

The PQR included a review of the permit file and supporting documents making up the administrative record. A review of these records indicated the state followed all of the administrative procedures required by 40 CFR Part 124, as described above. The administrative record and fact sheets contain very good descriptions of the facility and the process waste streams. Treatment descriptions are complete and well written. Files for POTWs and Industrial facilities contained printouts of DMRs, for the permit writer's review.

EPA has reviewed the fact sheets included with all draft major permits KDHE has sent to EPA during the year as well as the facts sheets/statement of basis for permits reviewed during the PQR. In addition to the fact sheets, KDHE provides a Water Quality Review Memorandum that

reviews all the data to make sure the permit complies with WQS. Fact sheets included listing of all permit limits, and how the limits were derived (technology-based effluent limits or TBELs, WQBELs, and WQBELs based on total maximum daily loads or TMDL, etc.). The fact sheets reviewed included the outcome of the KDHE permit derivation process, but did not consistently provide calculations supporting the permit limits. KDHE's permit derivation approaches set forth in the Kansas Implementation Procedures were followed, but were not detailed in every fact sheet.

Though brief and to the point, generally the record supporting the permit was detailed. Site inspections that gathered site specific information and data, including GPS information and pictures of the outfall(s), were often performed in advance of the permit renewal process and used for permit development. The supporting record for the permit generally was very good and included copies of pertinent emails, newspaper clippings, online articles, phone notes, internal communications, etc. EPA suggests that more of this detail should go into the fact sheet.

1. Documentation of Effluent Limitations

Permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. The permit record for TBELs should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for WQBELs as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file.

For the POTWs reviewed, permit writers apply applicable TBELs and consider water quality as well (ammonia, TRC, etc.) For the industrial facilities, permit writers make the assessment of applicable SIC Code and determine if an ELG applies. In both cases, the permit writer creates a list of pollutants of concern, and the WLAs are calculated by water quality specialists and the results are identified in the Water Quality Review Memorandum. The permit writer then develops the permit using the TBEL and WQBEL calculations. The most stringent of the final calculated limits is placed in the permit. Permit limits for POTWs and industrial facilities are calculated in units consistent with the applicable effluent guidelines. Permit limits are stated in term of mass and concentration for all parameters (except pH and temperature).

Permit writers are showing the basis for permit limits and changes for both POTWs and non-POTWs. Fact sheets indicate the basis of each permit limit (or monitoring requirement). Fact sheets contain a description of any changes in limits as permits are renewed with a reason for the new limit. The fact sheets for two permits, Parsons and Ellsworth, stated that a select parameter would no longer be monitored, in both cases a limited rationale was provided. Further explanation or information would have been helpful (e.g., no reasonable potential) to demonstrate that the change in monitoring did not constitute backsliding.

KDHE often used WLAs directly as permit limits. This did not follow the methodologies of the TSD, but is numerically protective because these limits are tighter than statistically derived limits.

Stream segment and designated uses were clearly mapped and applied in derivation of WQBELs. CWA Section 303(d) listings and stream impairments were identified in fact sheets and where TMDLs had been approved, the TMDL WLAs were applied. All pollutants and forms of impairment were addressed by permit writers and covered in the fact sheet and permit.

Findings:

- **Fact sheets should contain more detail on selection of pollutants of concern, reasonable potential, calculations, and KDHE permitting rationale.**

H. National Topic Areas

National topic areas are aspects of the NPDES permit program that warrant review based on the specific requirements applicable to the selected topic areas. These topic areas have been determined to be important on a national scale. National topic areas are reviewed for all state PQRs. The national topics areas are: nutrients, pesticides, and stormwater.

1. Nutrients

In March 2011, EPA announced a framework for nutrient reductions that, in part, called for ensuring the effectiveness of point source permits in sub-watersheds targeted or identified as priorities due to nutrient pollution. The framework specifically identified permits for municipal and industrial wastewater treatment facilities that contribute significant nitrogen and phosphorus loadings, CAFOs, and urban stormwater sources that discharge into nitrogen and phosphorus-impaired waters or are significant sources of nitrogen and phosphorus.

KDHE has taken a unique approach to nutrient control as described in the Surface Water Nutrient Reduction Plan (Appendix D). The plan is a policy approach for phasing in a form of technology-based limits. KDHE has established nutrient goals for major POTWs on a long term schedule that allows for consideration of treatment cost. This is a policy approach to controls, and does not fit the scheduling norms of technology and water quality-based permitting.

Technology-based nutrient limitations are being phased into municipal WWTF permits over three permit cycles. It is expected that most major (>1 MGD average design flow) municipal WWTFs can meet total nitrogen limits of 8 mg/L and total phosphorus limits of 1.5 mg/L on an annual average basis with biological nutrient removal technology. In Kansas, the 48 major WWTFs account for 85 % of the wastewater discharging to Kansas waters.

At the current time, Kansas has not adopted numeric nutrient WQS criteria but is requiring major facilities and large mechanical minor facilities building new plants or significantly upgrading their current plants to include nutrient reduction in their plans and to conduct cost and feasibility studies in order to meet the planned nutrient reduction. As Kansas has not adopted nutrient WQSs, the level of nutrient reduction is based upon the receiving stream characteristics, facility design flow rate and other criteria. Kansas has listed waters as impaired for nutrients without having nutrient criteria. Where TMDLs translate to nitrogen or phosphorus limits, NPDES permits contain limits conforming to the TMDL.

There is a requirement for minor or non-major facilities (<1 MGD average design flow) to

optimize treatment for nutrient removal and evaluate the cost of incorporating technology-based biological nutrient removal if the WWTF is proposed for expansion.

To assess how nutrients are addressed in the Kansas NPDES program, EPA Region 7 reviewed 3 permits (Wichita #3 WWTF, Parsons WWTF, and Creekstone Farms Premium Beef).

Wichita #3 WWTF is a major facility that was designed and built to provide for nutrient removal. The permit requires monitoring for Total Nitrogen (TN) and Total Phosphorus (TP) once a month, with an annual average goal of TN of ≤ 8.0 mg/l and TP of ≤ 1.5 mg/l. Cowskin Creek, to which the facility discharges, has a TMDL for TP. Monitoring data from 2010 to 2016 indicate Wichita #3 met the annual average goal for TP and TN in 3 out of the 7 years sampled, with the highest TP annual average at 1.72 mg/l and highest TN at 11.76 mg/l. KDHE also required monthly nutrient monitoring of Cowskin Creek upstream and downstream.

Parsons WWTF is a major facility that contains the same nutrient goals as Wichita #3. The facility discharges to Labette Creek, which is impaired for TP. The 2011 and 2012 monitoring data indicates that Parsons is meeting the annual average goals for TN at an annual average of 5.73 mg/l and TP at an annual average of 0.26 mg/l.

Creekstone Farms Premium Beef is a minor industrial facility subject to effluent guidelines per 40 CFR 432, Subpart B – Complex Slaughterhouses. Therefore, there is an ELG limit for TN; TP is not a pollutant parameter subject to the ELG, but is required by the permit to be monitored weekly. The permit requires the facility to assess its ability to further minimize nitrogen and phosphorus in the effluent by October 1, 2016. Based on the cost, socioeconomic impact, and downstream water quality concerns, KDHE will evaluate all alternatives for implementing a feasible alternative for nutrient reduction.

Kansas has been very successful in getting nutrient reduction and establishing nutrient monitoring. All majors and some minors include monitoring consistent with the Surface Water Nutrient Reduction Plan. As of 2015, 75% of the 48 targeted facilities have nitrification/denitrification installed, while 60% have some type of phosphorus reduction installed. Kansas has seen the median TN discharged by these facilities drop to 9.43 mg/L and the median TP drop to 1.99 mg/L. This represents significant reduction since 2004. Kansas needs to continue to encourage all facilities to meet the Surface Water Nutrient Reduction Plan reduction targets by 2019 to achieve N and P reduction goals.

Findings:

- **Kansas should continue to encourage all facilities to meet the Surface Water Nutrient Reduction Plan reduction targets by 2019 to achieve N and P reduction goals.**

2. Pesticides

On October 31, 2011, the EPA issued a final NPDES *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides*. This action was in response to a January 2009 decision by the U.S. Sixth Circuit Court of Appeals (National Cotton Council of America v.

EPA, 553 F.3d 927 (6th Circuit 2009)) in which the Court vacated EPA's 2006 Final Rule on Aquatic Pesticides (71 Fed. Reg. 68483, November 27, 2006) and found that point source discharges of biological pesticides and chemical pesticides that leave a residue, into waters of the U.S. were pollutants under the CWA. The federal PGP applies where the EPA is the permitting authority. Approximately 40 authorized state NPDES authorities had issued state pesticide general permits as of November 2011.

Background

In its National Cotton Council decision, the Court held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant." In response to this decision, on April 9, 2009, the EPA requested a two-year stay of the mandate to provide the agency time to develop general permits, to assist NPDES-authorized states to develop their NPDES permits, and to provide outreach and education to the regulated community. On June 8, 2009, the Sixth Circuit Court granted EPA the two-year stay of the mandate. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted EPA's request for an extension to allow more time for pesticide operators to obtain permits for pesticide discharges into U.S. waters. The Court's decision extended the deadline for when permits would be required from April 9, 2011 to October 31, 2011.

As a result of the Court's decision to vacate the 2006 NPDES Pesticides Rule, NPDES permits are required for discharges of biological pesticides and of chemical pesticides that leave a residue to Waters of the U.S.. EPA proposed a draft pesticide general permit on June 4, 2010 to cover certain discharges resulting from pesticide applications. EPA Regional offices and state NPDES authorities may issue additional general permits or individual permits if needed.

Results

KDHE issued the Pesticide General Permit for Point Source Discharges from the Application of Pesticides to waters of the U.S. on April 8, 2011. This permit is available to operators who discharge to, over, or near waters of the U.S. from the application of (1) biological pesticides or (2) chemical pesticides that leave a residue (hereinafter collectively "pesticides"), when the pesticide application is for one of the following pesticide use patterns:

- Mosquito and other flying or aquatic insect pest control;
- Weed, algae, pathogen or fish parasite control;
- Nuisance animal control; or,
- Forest canopy pest control.

In addition to the pesticide general permit, Kansas has a pesticide application licensing program that prohibits the misuse of pesticide applications. This program is enforced by the Kansas Department of Agriculture through its implementation of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and state pesticide licensing program.

The Kansas pesticide general permit covers waters of the U.S. and waters of the State, as defined in KSA 65-161. Discharges to impaired streams are prohibited if the water is impaired for the proposed pesticide or its degradate(s). Discharges to a Tier III water, or outstanding national resource waters (ONRWs), are prohibited unless a request for the discharge receives written

approval by KDHE along with the submission of a NOI to be covered by the permit. Discharges to a water body on which a public water supply intake is located within ¼- mile of the proposed discharge is prohibited unless a written request for the discharge is submitted and approval is granted by KDHE.

From November 1, 2011 through October 31, 2012, the permit did not require any operation to submit a NOI. On and after November 1, 2012, NOIs are required for all proposed discharges if the annual threshold criteria is met or exceeded. The annual threshold criteria for each pesticide use pattern in the Kansas pesticide general permit is listed below:

Pesticide Use Pattern	Annual Threshold
Mosquito and Other Flying or Aquatic Insect Pest Control	6400 acres of treatment area
Weed, Algae, Pathogen or Fish Parasite Control	
<ul style="list-style-type: none"> • In Water 	80 acres of treatment area
<ul style="list-style-type: none"> • At Water's Edge 	20 linear miles of treatment area at water's edge
Nuisance Animal Control	
<ul style="list-style-type: none"> • In Water 	80 acres of treatment area
<ul style="list-style-type: none"> • At Water's Edge 	20 linear miles of treatment area at water's edge
Forest Canopy Pest Control	6400 acres of treatment area

The State does not have an electronic NOI system, but anticipates making NOI data available online by December 2020, as required by the federal e-Reporting Rule. Kansas has received four NOIs: 2 from U.S. Fish and Wildlife Services (FWS); 1 from the City of McPherson, KS; and 1 from Lone Star Lake for weed control.

There were no existing state laws or obstacles preventing Kansas from fully implementing the NPDES requirement for pesticide applications. The Kansas Department of Agriculture issues pesticide applicator licenses and any misuse is enforced under state law and/or FIFRA.

The general permit has sections on Monitoring, Pesticide Management Plan, Corrective Action, and Recordkeeping that are consistent with the federal pesticide general permit. The permit does not require the permittee to submit an Annual Report or monitoring for ambient water quality. The KDHE has an existing stream and lake monitoring network that monitors ambient water quality on a quarterly basis.

The Kansas pesticide general permit does include permitting requirements for discharges associated with declared pest emergencies. Some eastern states have experienced declared pest emergencies in the past due to outbreaks of the West Nile virus. Since it is difficult to know when a vector virus such as West Nile or Zika will affect a community, the EPA suggests states consider including a section for declared pest emergencies in their pesticide general permits. A declared pest emergency is an event defined by a public declaration by a federal agency, state, or local government of a pest problem determined to require control through application of a pesticide beginning less than ten days after identification of the need for pest control. This public

declaration may be based on: (1) significant risk to human health; (2) significant economic loss; or (3) significant risk to: (i) endangered species, (ii) threatened species, (iii) beneficial organisms, or (iv) the environment.

The KDHE has utilized 0.1 FTE to implement this general permit throughout the State and has conducted 11 outreach activities to inform the regulated community on NPDES permitting of discharges associated with pesticide applications.

The pesticide general permit has been properly administered in Kansas.

3. **Pretreatment** – The Pretreatment Section of the PQR is not included at this time, but will be included at a later date. Once all the pretreatment concerns have been resolved, the PQR will become final.

4. **Stormwater**

The NPDES program requires stormwater discharges from certain MS4s, industrial activities, and construction sites to be permitted. Generally, EPA and NPDES-authorized states issue individual permits for medium and large MS4s and general permits for smaller MS4s, industrial activities, and construction activities.

Overview

The CWA specifies that certain kinds of stormwater discharges are point source discharges requiring permits; NPDES regulations address stormwater discharges from construction sites over one acre, certain industrial activities and MS4s. Any state which is authorized to implement the NPDES program also has responsibility for implementing the stormwater permitting program.

KDHE is authorized to implement all aspects of the federally mandated stormwater program. Stormwater permits are written at the central office in Topeka, and the central office has a website with information, instructions, permits and forms to assist the regulated community (<http://www.kdheks.gov/stormwater/index.html>). Authorizations to discharge under the general permit and enforcement follow-up are handled out of the central office, while inspections/complaint follow-up are generally done by field offices. KDHE's stormwater program is meeting the minimum federal requirements for permitting. The MS4 stormwater program is the stormwater program with the most room for improvement.

Construction Stormwater Permitting

KDHE covers construction stormwater permitting by authorizations under the "Kansas General Permit for Stormwater Runoff Associated with Construction Activities". The current general construction permit was issued March 2, 2012, and expires March 1, 2017. On March 6, 2014, EPA published in the Federal Register modifications to Construction and Development Effluent Guidelines. The new Kansas construction stormwater permit (to be issued before the expiration of the current permit) will need to include the modified requirements including a definition of "infeasible." There are currently about 2,800 construction projects covered by Kansas' construction stormwater general permit.

NOI forms, fees and supporting documentation for coverage under the construction stormwater general permit are recommended to be submitted to the central office at least 60 days before construction begins. Permittees are required to have on site and implement a Stormwater Pollution Prevention Plan (SWPPP) at the time construction begins. The general permit requires that the permittee must include information including a site map, a site plan, a description of structural controls and other BMPs that are to be included and expanded upon in the SWPPP after authorization, however the permittee is not required to submit the SWPPP unless the department or EPA requests it. When reissued, the permit should make it clear that the SWPPP itself does not contain effluent limits, but that the SWPPP must include the specific control measures that will be used to meet the limits contained in the permit (i.e., the technology-based BMP limits). Annual permit fees are levied until a Notice of Termination is submitted. If the annual fee is not remitted, permit coverage is terminated.

The construction stormwater permitting program appears to be running well. A weakness of the current permit, which can be addressed when the permit is reissued, is that the requirement for buffer and vegetative filter strips doesn't contain any numeric target. For example, the Missouri general permit requires a 25 foot buffer or the equivalent of a 25 foot buffer. Under the current Kansas permit, the lack of specific control criteria (i.e., buffer size) fails to ensure that permit compliance actually leads to protection of water quality.

Industrial Stormwater Permitting

KDHE covers facilities needing industrial stormwater permits in two ways: facilities needing both an NPDES permit for the direct discharge of wastewater to waters of the State and stormwater related discharges are requirements are to have an individual NPDES permit; and facilities needing only a permit for the discharge of stormwater apply for and receive coverage under the state's industrial stormwater general permit. The current industrial stormwater general permit was issued effective November 1, 2011, and will expire October 31, 2016. At the beginning of 2016 there were 209 facilities with stormwater requirements covered by individual permits, and 957 facilities covered by general permits. Both types of authorizations are issued out of the central office.

Under both types of permit, facilities are required to develop a site-specific SWPPP which include BMPs for reducing pollutants in the stormwater. There are no sampling requirements in the current general permit. The 2015 EPA general industrial stormwater permit contains requirements specific to the different industrial sectors, and often includes sampling requirements for certain industrial sectors, along with benchmark levels, for gauging the significance of monitored pollutant levels providing an indication of whether the current BMPs are effective enough. KDHE could improve the water quality protection provided by their 2016 reissued permit by incorporating the appropriate/applicable provisions of the 2015 EPA permit discussed immediately above. The reissued permit should make it clear that the SWPPP itself does not contain effluent limits, but that the SWPPP documents the specific control measures that will be used to meet the limits contained in the permit (i.e., the technology-based BMP limits).

The Hill's Pet Nutrition Inc. permit was reviewed. The permit was an individual NPDES permit addressing both process waste water and industrial stormwater. The permit required development

and implementation of a very detailed SWPPP. The permit on page three requires the permittee to notify KDHE if there will be discharge of any new “pollutant,” however the permit never defines “pollutant.” The permit could be improved by providing a definition of “pollutant” especially since the definition is much broader than might be normally understood.

The Hamm Quarry individual combined process waste water and industrial stormwater permit was also reviewed. The permit required implementation of a SWPPP, which had been submitted to the state in 2009. The permit, on page four, requires the permittee to notify KDHE if there will be discharge of any new “toxic pollutant,” however the permit never defines “toxic pollutant.”

MS4 Permitting

Phase I MS4s

There are three Phase I MS4s in Kansas: Unified Government of Wyandotte County and Kansas City, Wichita, and Topeka. EPA HQ has encouraged states to move towards having similar permitting requirements for Phase I and Phase II communities given the similarity of stormwater conditions among most Phase I and Phase II communities. KDHE has continued to make efforts towards this goal. The Topeka permit was reviewed and it was found to contain all the requirements that are common with Phase II communities and it contained the additional Phase I requirement for industrial stormwater monitoring. The permit also appropriately addressed TMDL pollutants.

Phase II MS4s

There are 61 authorizations under the state’s Phase II MS4 general permits. The general permits were issued February 1, 2014, and expire January 31, 2019. The latest general permits place an emphasis on addressing any TMDLs that are applicable to a given MS4, including much expanded monitoring requirements. KDHE issues a customized authorization under the general permit to each MS4 that discharges to a waterbody that has a TMDL in place. The authorization specifies that the Stormwater Management Program (SMP) the MS4 develops must contain BMPs to address each TMDL pollutant of concern.

During the file review the Phase II general permit for Gardner was reviewed. The Gardner permit appropriately addressed TMDL pollutants. The permit itself does not specify what actions under the six minimum control measures must be taken (none of the Phase II permits do). Instead, the permit refers to a KDHE website where the requirements of the six minimum controls are spelled out. EPA encourages KDHE to incorporate all the requirements under the six minimum controls in the permit itself to ensure the specific requirements of the permit are clear and easily identifiable even if the permittee experienced turnover or loss of institutional knowledge. This concern is amplified because not all annual reports or SMP plans are being reviewed by the state due to limited resources in the program.

EPA is in process of adopting regulatory changes that could change how detailed MS4 permits must be, or change the process for approving SMPs, or both. KDHE will need to make sure the next round of MS4 permits implement these new regulations.

Overall the state appears to be implementing the required elements of an NPDES stormwater permitting program. EPA has provided recommendations for program improvements.

Findings:

- **Upon renewal, the construction stormwater permit must include the modified effluent guideline requirements of 40 CFR 450, including a definition of “infeasible.”**
- **When reissued, the general construction stormwater permit, and the general industrial stormwater permit should make it clear that the SWPPP itself does not contain effluent limits, but that the SWPPP must include the specific control measures that will be used to meet the limits contained in the permit (i.e. the technology-based BMP limits).**
- **When reissued, EPA recommends that the construction stormwater permit include the requirement for buffer and vegetative filter strips contain a specific numeric target.**
- **The water quality protection could be improved by incorporating EPA’s 2015 MSGP sampling requirements and benchmark levels for certain industrial sectors .**
- **The industrial permits should provide definitions for “pollutant” and “toxic pollutant.”**
- **The next round of general MS4 permits should incorporate the requirements under the six minimum controls directly into the permit, rather than referencing them via website.**

IV. REGIONAL TOPIC AREA FINDINGS

1. Power Plant Permitting

Permits Reviewed were:

BPU-Quindaro Power Station	KS0080942
LaCygne Generating Station	KS0080071

Several recent EPA rulemakings have influenced NPDES permits for power plants. New air pollution regulations are requiring capture technologies that create new wastewater streams. The new regulations implementing CWA Section 316(b) have required biological and engineering studies to be completed over the next few years. EPA recently promulgated the Steam Electric Guidelines covering several new pollution waste streams. The Coal Combustion Residue (CCR) rules are driving dewatering and closure of ash ponds that will need NPDES coverage.

EPA reviewed two power plant permits using the PQR checklist: a coal/natural gas fired plant on the Missouri River, and a coal fired plant with a cooling lake. Both permits had appropriate technology and water quality-based limits.

The BPU-Quindaro plant is located on the Missouri River and has open cycle cooling. Effluent guidelines were applied properly in the permit. KDHE calculated net limits for solids due to the high amounts of solids present in Missouri River water. The permit had been modified to switch from coal to natural gas as the fuel source. Heat limits were based on CORMIX modeling.

The KCPL LaCygne plant is a coal burning power plant with a “built for purpose” cooling lake. Effluent limits were set based on applicable effluent guidelines. The permit included new controls for the Flue Gas Desulfurization (gypsum absorption with waste going to landfill). The reissued permit included a reopener/implementation section for the new 316(b) rules.

Kansas, like other states, has been waiting for regulatory certainty and has backlogged some steam electric power plant permits. Permits that were issued recently included a requirement to comply with any new rules and reopener language to allow for permit modification, if needed.

KDHE has been proactive in implementing the new 316(b) regulations. KDHE prepared rule summaries and immediately shared these with EPA, Region 7 States, and permittees: often ahead of EPA in this regard.

In the months after the 316(b) rules became effective, KDHE organized a meeting with EPA, KDHE, FWS, and all the power plant representatives from the State of Kansas. The meeting allowed all interested parties to fully discuss implementation approaches and plans, and to work through questions to ensure consistency. The group developed questions that enabled EPA’s Leadership Work Group to better address and resolve issues of national implementation.

KDHE has made site visits to and had meetings with several facilities in the state to work out key issues and is continuing to communicate with the state fisheries personnel and with the FWS. EPA, FWS, and KDHE personnel met in Manhattan, KS, to discuss the new 316(b) rule and the role of FWS in implementation.

In other communications, the EPA has worked closely with KDHE and other states to address site specific implementation and identify key issues. KDHE and EPA are also working on the documentation to determine whether several facilities with built-for-purpose cooling lakes would be equivalent to closed cycle cooling. These findings will then be shared with the FWS. KDHE has also considered heat discharges from power plants. The BPU-Quindaro had CORMIX modeling to assess the regulatory mixing zone.

As permits are reissued by KDHE, the state intends to include requirements to conduct the studies required in the new 316(b) rules, determine appropriate heat limits, and implement the requirement of the new Steam Electric effluent guideline.

EPA recognizes KDHE efforts in preparing for implementation of the 316(b) regulation. EPA recommends that KDHE’s permit writers prepare fact sheets carefully and articulate the technical and regulatory basis for permit limitations, and fully document the complex decisions that will be part of the next round of permits.

2. CAFOs

KDHE has permitted CAFOs per Federal Effluent Guidelines since 1974. At the time of the review, Kansas had 423 livestock facilities that met the definition of a large CAFO. Kansas has several of the largest CAFOs in the Region, including a cattle facility with 140,000 head, a dairy facility with 41,000 head, and a swine operation contains 396,000 head. Currently Kansas statutes require all federally-defined large CAFOs to apply for a NPDES permit, and small and medium AFOs with significant pollution potential to apply for a state permit.

EPA reviewed the files of 6 CAFOs:

Premium Feeders, Inc.:	KS0116459
Duff Land and Cattle:	KS0037923
Pratt Feeders, LLC:	KS0036374
Heritage Feeders Sublette:	KS0115033
Haw Ranch Feedlot II:	KS0037567 (also SRF review)(permit expired June 7, 2014)
Great Bend Feeding, Inc.:	KS0040576 (also SRF review)

Permit Review

Any permit issued to a CAFO must include the requirements listed in 40 CFR 122.42(e)(1) through (e)(6). These requirements include the nine minimum standards for a Nutrient Management Plan (NMP), annual reporting and transfer requirements, and the terms needed to be included in the site-specific NMP. The requirements should be listed in a clear and concise format to make it easier for the permittee to comply as well as make the permit requirements straightforward for inspection and enforcement purposes. EPA had difficulty in finding all of the requirements as some are listed in the Standard Conditions, others are distributed throughout the permit, while the requirement for annual testing of manure was not included. The Annual Reporting requirement, listed in the Standard Conditions, states that “the permittee shall provide on forms available from or acceptable to the Department, an annual report on the process wastes generated and disposed/re-used for the facility.” While the KDHE form indirectly includes all of the Annual Report requirements, the 12 requirement conditions need to be clearly listed in the permit.

KDHE’s CAFO permit lists some of the required terms for a site-specific NMP in the land application section of the permit. The specific requirements are not located in a single section of the permit, but are rather listed in several tables that reference various sections of the permit where the required information can be found. In three of the permits reviewed for the PQR, the “Nutrient Loss Risk Summary” table was referenced in determining maximum application rate limitations. The table includes the field name, soil test level, phosphorus index rating, and application criteria (i.e., 1.0 x P2O5 removal). Annual updates to the NMPs submitted by the CAFO indicate the application conditions for some fields changed and are therefore not consistent with the table in the permit. A better table to reference would have been “Maximum Nutrient Application Recommendations for Wastewater or Solids” based on the maximum rates calculated using the most recent soil and manure test (40 CFR 122.42(e)(5)(ii)(D)). EPA suggests KDHE concisely list the terms of the NMP in the permit, but could use the NMP approval letter to indicate where in the NMP the required terms are found.

Nutrient Management Plans (NMP) and Annual Reports

In the 2011 PQR, EPA noted that KDHE had done an excellent job in keeping up with updates to the NMP while still reviewing, commenting, and approving new nutrient plans and annual reports. At that time, KDHE had approved 257 of the 388 NMPs submitted. Since 2011, 421 of the 423 CAFOs have submitted NMPs, but the approval process has been slow. The majority of Kansas NPDES permits listed as backlogged or priority permits are CAFO-related, due to the difficulty by technical service providers to develop and submit approvable NMPs with permit applications. NMPs submitted by facilities that transfer all of their waste to a separate legal

entity can be reviewed without delay, whereas NMPs written by service providers that fail to meet all of the required standards may take much longer to approve.

As a result of the annual soil sampling required by the Kansas Technical Standard, there are a number of NMPs that are updated every year, as required under 40 CFR 122.42(e)(5)(ii)(D). Changes in the nitrogen and phosphorus soil concentration have led to an annual reassessment of the phosphorus index and maximum application rate. While KDHE has been able to review and approve almost all of the 423 NMPs submitted (many are now up for renewal), not all annual NMP updates are reviewed.

Annual Reports are reviewed and approved for completeness, but are not reviewed for compliance with the NMP. Some of the Annual Reports that were reviewed did not appear complete, although they were approved. The 2015 annual report for Duff Land and Cattle indicated the facility had 1,791 head of beef cattle, yet listed 0 tons of solid waste generated and 0 gallons of process wastewater generated. The facility indicated 0 waste exported and 0 waste land applied. In the responses to both of the CAFO's 2014 and 2015 Annual Reports, KDHE wrote that the "Department hereby considers your report to be complete." It should be noted that the facility did not have the land application acres needed to apply at an agronomic rate. A one-year variance request was granted so the facility could apply on 2 fields on a phosphorus-based rate.

The Annual Reports for Haw Ranch II from 2011 to 2015 indicate a total of 130,155 tons of solid manure was generated over that time, with just 17,205 tons exported in 2012. As Haw Ranch has a history of soils with a very high phosphorus level, it is important to know whether the solids were exported, land applied, or were the pens not scraped for a number of years. EPA would not consider this report to be complete and would require a follow-up.

Pratt Feeder's Annual Reports from 2010 to 2015 suggests the facility over-applied 27 out of 51 times when comparing the maximum application rate allowed versus the actual amount applied. EPA notes that weather can cause increases in wastewater application rates as applications are needed to maintain lagoon operating levels, but there did not appear to be any follow-up after 5 years. From 2012 to 2015, the reported actual amount applied on one of the designated fields (North Phillips) was almost twice as much as the NMP maximum allowable limit. It should be noted that during the four years covered by the Annual Reports EPA reviewed, the phosphorus concentration fluctuated in part due to soil variability (129, 96, 102, 166 ppm).

EPA understands that KDHE has approximately 423 Annual Reports to review, but unlike the NMPs, Annual Reports indicate the actual amount of manure (nitrates and phosphorus) land applied or exported. Required soil and manure analyses that are not submitted with updated NMPs should be submitted with the Annual Reports. EPA suggests that KDHE review Annual Reports in comparison with the NMPs to determine which facilities may have issues.

Transfer Issues

The over-application of nutrients, such as nitrogen and phosphorus, has become a growing concern for both KDHE and EPA R7. The 2003 CAFO regulations permitted facilities to transfer their manure and process wastewater, provided the facility recorded the date, recipient name and

address, the amount transferred, and supplied the recipient of the manure with a copy of the most current nutrient analysis. Once the manure is transferred from a CAFO it is no longer regulated pursuant to CAFO regulations.

Yearly transfer records are submitted with the Annual Reports. During the PQR, EPA looked at the 2015 annual reports for 6 facilities: 2 transferred all of their waste (Premium and Heritage); 2 transferred only solids (Great Bend and Pratt); 1 land applied their wastewater, but gave no indication as to what they did with the solids (Haw Ranch II); and 1 indicated no waste generated and no waste was applied or transferred (Duff).

The ability of CAFOs to transfer manure affects KDHE's ability to regulate CAFOs where there are signs of questionable land application practices. Great Bend Feeding had 27 land application fields listed in its 2009 NMP. Three of those fields had soil samples with over 2,000 ppm available phosphorus. In 2011, all fields that had previously received solid manure were removed from the NMP and Great Bend Feeding now exports all of its solid manure.

In another example, Premium Feeders transferred all of their waste to a separate legal entity, Republican Valley Cattle Feeders (RVCF) that listed the same address as the permittee (and same federal business number). The annual report indicated that a manure analysis was not provided to RVCF upon transfer as required. On multiple occasions before 2010, Premium Feeders requested and received permission from KDHE to land apply wastewater to saturated ground because the facility did not have adequate storage capacity. Most of the application fields listed prior to the 2010 NMP were located near or adjacent to the Republican River and an unnamed tributary. The Republican River has a TMDL for fecal coliform bacteria and is on the 303(d) list for total phosphorus.

Careful evaluation of the operational characteristics of both the transferring and receiving entities is necessary. Some of the questions for consideration are whether the same actual individual operates a CAFO and a field to which manure, litter, or process wastewater from that CAFO's production area is applied, is that field a "land application area" under the control of the CAFO owner or operator, as defined in 40 CFR part 122.23(b)(3), even if the CAFO and the field are owned by two different legal entities? The discharge of manure, litter, and process wastewater as a result of its application by the CAFO operator to such an area is therefore a discharge from the CAFO subject to national pollutant discharge elimination system (NPDES) requirements, unless it is agricultural stormwater per 40 C.F.R. § 122.23(e).

A land application area is defined as "land under the control of an AFO owner or operator, whether it is owned, rented, or leased, to which manure, litter or process wastewater from the AFO production area is or may be applied" (40 C.F.R. § 122.23(b)(3)).

Because a land application area is defined as land under the control of an AFO owner *or operator*, land owned by an entity separate from the CAFO owner could still meet this definition if it is controlled by a CAFO operator. EPA regulations define "owner or operator" as "the owner or operator of any 'facility or activity' subject to regulation under the NPDES program." 40 C.F.R. § 122.2.

Whether a CAFO operator “controls” a land application area pursuant to 40 C.F.R. § 122.23(b)(3) is a fact-specific determination. An example of a site-specific consideration that may indicate whether a land application area is under the control of an CAFO owner or operator is the extent to which the CAFO’s officers, managers, or employees engage in operations at the land application area, such as determining the timing, rate, methods of nutrient application or performance of the application. Analysis of this and other considerations could indicate that a land application area is under the control of a CAFO, pursuant to the definition at 122.23(b)(3), even if the land application area is owned by a separate corporation or other entity. As noted above, the discharge of manure, litter, and process wastewater as a result of its application by the CAFO operator to such an area is subject to NPDES requirements, unless it is agricultural stormwater. 40 C.F.R. § 122.23(e).

Kansas has had a model CAFO program for years and has, by statute, individually permitted all facilities subject to CWA jurisdiction, as well as those with a significant pollution potential. However, staffing shortages make it difficult to maintain the same type of operational processes of previous years.

Findings:

- **Any permit issued to a CAFO must include the requirements listed in 40 CFR 122.42(e)(1) through (e)(6).**
- **EPA suggests that KDHE review CAFO Annual Reports in comparison with the respective NMPs to determine which facilities may have issues.**

V. ACTION ITEMS

This section provides proposed action items to improve Kansas NPDES permit programs. This list of proposed action items will serve as the basis for ongoing discussions between Region 7 and Kansas as well as between Region 7 and EPA HQ. These discussions should focus on eliminating program deficiencies to improve performance by enabling good quality, defensible permits issued in a timely fashion.

The proposed action items are divided into three categories to identify the priority that should be placed on each Item and facilitate discussions between Regions and states.

- **Critical Findings (Category One) - Most Significant:** Proposed action items will address a current deficiency or noncompliance with respect to a federal regulation.
- **Recommended Actions (Category Two) -** Proposed action items will address a current deficiency with respect to EPA guidance or policy.
- **Suggested Practices (Category Three) -** Proposed action items are listed as recommendations to increase the effectiveness of the state’s or Region’s permit program.

The critical findings and recommended actions proposed should be used to augment the existing list of “follow up actions” currently established as an indicator performance measure and tracked under EPA’s Strategic Plan Water Quality Goals or may serve as a roadmap for modifications to the Region’s program management.

A. Critical Findings – Category One

- **Federal Rules require that permit applications for major POTWs include three priority pollutant scans (40 CFR 122.21(j)(4) and 40 CFR 122.21 appendix J).**

After review of KDHE's response to this action item (Appendix E), EPA confirms its position that regulation requires 3 priority pollutant scans within a 4.5-year period.

- **Any permit issued to a CAFO must include the requirements listed in 40 CFR 122.42(e)(1) through (e)(6).**

EPA has reviewed and approves the revised CAFO permit template (Appendix E) that now includes all nutrient management requirements and is to be used in issuing future CAFO permits.

- **KDHE needs to insure that complete applications are submitted as required (40 CFR 122.21(a)(2))**

EPA concurs with KDHE's decision (Appendix E) to require future permit applicators to submit the EPA Form 2C analytical table for priority pollutants.

B. Recommended Actions – Category Two

- None noted

C. Suggested Practices – Category Three

- **Permit writers should consider increased monitoring frequency for discharges that are prone to high variability or potential for toxicity.**
- **KDHE should continue to encourage all facilities to meet the Surface Water Nutrient Reduction Plan reduction targets by 2019.**
- **Upon renewal, the construction stormwater permit must include the modified effluent guideline requirements of 40 CFR 450, including a definition of "infeasible."**
- **When reissued, the general construction stormwater permit, and the general industrial stormwater permit should make it clear that the SWPPP itself does not contain effluent limits, but that the SWPPP must include the specific control measures that will be used to meet the limits contained in the permit (i.e. the technology-based BMP limits).**
- **When reissued, EPA recommends that the construction stormwater permit include the requirement for buffer and vegetative filter strips contain a specific numeric target.**
- **The water quality protection could be improved by incorporating EPA's 2015 MSGP sampling requirements and benchmark levels for certain industrial sectors.**

In response to KDHE's comments (Appendix E), EPA was pleased that KDHE allowed for benchmarks in the latest Industrial Stormwater General permit.

- **The industrial permits should provide definitions for “pollutant” and “toxic pollutant.”**
- **The next round of general MS4 permits should incorporate the requirements under the six minimum controls directly into the permit, rather than referencing them via website.**

In response to KDHE's comments (Appendix E), EPA continues to recommend that controls be incorporated in the permit.

- **EPA suggests that KDHE review CAFO Annual Reports in comparison with the respective NMPs to determine which facilities may have issues.**
- **Fact sheets should contain more detail on selection of pollutants of concern, reasonable potential, calculations, and KDHE permitting rationale.**

