

Solid Waste UPDATE



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Barton County Landfill

by Sam Sunderraj, Bureau of Waste Management

In the heart of Kansas lies Barton County and the Barton County Sanitary Landfill. The landfill, which receives about 100 tons per day, quietly and purposefully meets the solid waste disposal needs of the City of Great Bend and the surrounding area. The landfill, which occupies approximately 370 acres, is defined as a Subtitle D composite-lined landfill with a couple of state-of-the-art features. In 2003, the site constructed its first alternate earthen final cover, while the nation was exploring this option. Alternate final covers can be constructed now under EPA's Research, Development and Demonstration (RD&D) Rule which was promulgated in 2004. In January of this year, Barton County requested and obtained approval to add liquids which has clear long term benefits, and potential short term benefits. Long term benefits include accelerated stabilization of the solid waste to minimize post-closure care responsibilities and potentially returning the disposal area to some suitable land use. In the short term, accelerated waste decomposition "regenerates" disposal capacity and also results in earlier production of landfill gas in larger quantities that could be, and should be, beneficially used.



Landfill management and their engineering consultant are in the final stages of preparing a permit modification application to efficiently and economically maximize the use of the available disposal area. Thus, the County is taking meaningful steps to assure that this disposal facility is available well into the future.

Near the entrance to the facility is a Household Hazardous Waste Collection and Processing Center. It is a precast concrete containment building that was constructed in accordance with applicable fire and electrical codes. This household hazardous waste facility serves the needs of the citizens of Barton County, Pawnee County and the southern half of Ellsworth County.

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The Special Waste Disposal Process

by Tony Guy, Bureau of Waste Management

Special waste is a type of solid waste that typically contains one or more hazardous constituents, but at concentrations below what would classify the material as a hazardous waste. Testing is usually required to verify that the waste is "non-hazardous." Some non-hazardous solid wastes are regulated as special waste because of their physical, chemical, or biological characteristics, including sewage sludge, blasting media, industrial liquids, and other materials. These wastes must be managed in accordance with special standards to ensure safety is maintained during transportation and all handling and disposal practices.

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EPA Stormwater Enforcement at Solid Waste Facilities

by Bill Bider, Director, Bureau of Waste Management

In April 2016, information was sent to all permitted solid waste facilities to remind owners and operators of their responsibilities related to the industrial stormwater provisions of the federal National Pollution Discharge Elimination System (NPDES) regulations. These regulations are above and beyond any stormwater requirements found in state solid waste regulations or in solid waste permit conditions, so compliance with a solid waste permit does not translate into compliance with these “water” rules that EPA has chosen to aggressively enforce. Communications with facilities were prompted by a Region 7 EPA enforcement action against a Kansas county for observed violations of the stormwater regulations and their own Industrial Stormwater Discharge Permit and stormwater pollution prevention plan (SWPPP). That county operates a C&D landfill, a transfer station, and a composting operation, and it has a recycled metal pile. The county settled with EPA to pay a \$20,000 penalty primarily for administrative violations related to the performance of quarterly inspections, recordkeeping, training, and annual site evaluations.

The applicability of these regulations appear to effect nearly all permitted solid waste facilities in Kansas and some recycling facilities because EPA has stated that all facilities that have the potential to contaminate stormwater are covered by these regulations. However, EPA’s interest seems targeted at MSW landfills and more complex sites consisting of multiple operations as described above. Many solid waste facilities have NPDES Industrial Stormwater Permits and associated SWPPPs, but many do not.

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Preventing Odors at Composting Facilities

by Arthur Fink, Bureau of Waste Management

The warm days of summer are upon Kansas, and along with camping, fishing, harvest, and putting up hay, a special set of circumstances also appear at compost facilities across the state. These yearly warm weather changes can cause havoc by creating noxious odors, equipment damage, and a less than desirable finished product. The following information will explain what these changes are and how diligent compost facility operators can overcome them.

Overwhelming “septic” smell of rotting vegetation – This can easily happen during warm months and is most often attributable to increased grass clippings and other wet vegetative wastes coming in to the composting facility. The high levels of moisture and nitrogen found in these types of materials can quickly go from the aerobic process of compost to the anaerobic process of digestion/rot which in turn can lead to the production of very offensive odors.

Yard waste entering the facility in plastic bags rather than paper bags – Due to the heavy and wet nature of lawn clippings and other types of green yard waste, some citizens may use plastic bags and sacks to transport the material to the composting facility. Using plastic instead of paper increases the chance that the material inside the bag will turn anaerobic, and unlike paper yard waste bags, plastic bags are not compostable. Furthermore, plastic bags can cause breakdowns and costly repairs to equipment by getting wrapped around power shafts, screens, and conveyors.

Both of the above issues can ultimately lead to a finished compost product that is of poor quality – Compost that has a strong, unpleasant odor and/or is contaminated with trash, like plastic bags, will more often than not have very few takers. And once a compromised finished product is produced at a compost facility, getting rid of it can prove to be a big challenge. The difficulty in managing a pile of bad compost can also affect the flow of material through a facility and cause issues during inspection.

There are a few simple best management practices (BMPs) than can be used to prevent the above conditions from causing operational difficulties.

Combating anaerobic conditions and the resulting noxious odors – The two main ingredients typically found at most yard waste composting facilities are wet, green nitrogenous materials (like grass clippings) and dry, brown, carbonaceous materials (like leaves in fall). Both types of materials are needed to produce a consistent, good quality compost. By stockpiling leaves, wood chips, and other dry carbon sources during the fall and winter, there will be adequate blending material to mix with the lawn clippings that arrive in the spring to keep the aeration, carbon to nitrogen ratio, and moisture within acceptable limits during the composting process effectively reducing the chances for anaerobic conditions to develop.

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Powerful Tornado Strikes Ford County Landfill

by Dennis Degner, Bureau of Waste Management

On the evening of May 24, 2016 a powerful tornado swept through the northwest part of Ford County striking the county-owned municipal solid waste landfill. The tornadic winds caused severe damage to the onsite structures, which included the scale house, office area, maintenance and storage building, and equipment being stored within the building. Although landfill support equipment was damaged, the waste compactor was located away from the buildings and at the active cell. Therefore, it was spared from the damage.

Before ending landfill operations on May 24, the scale operator secured her operational records well and with some good fortune, the records were found intact despite damage to the landfill scale house and office.

Thus, the next morning at about 10 o'clock the landfill was again open to accept waste; initially the scale and related computer system was not available for weighing and billing. However, by 11 a.m. power was restored and weighing of all incoming waste resumed within a temporary scale house and office.

Some contingency planning by all landfill managers and supervisors is prudent to prepare for a natural disaster that could directly affect your facility. Securing records and computer systems at the end of each working day, as was the practice of Ford County, allowed them to resume scale and waste management operations the day after their landfill had a direct hit from a tornado. Although all situations are different, this is an excellent example for all Kansas landfill managers and personnel on how daily planning and plan implementation enabled continued and smooth operations of this critical public service after such a catastrophic event. Other contingency planning ideas relate to access to back-up equipment, off-site storage of a second set of key records, and contracts or other agreements with nearby permitted facilities to support one another as needed following a natural disaster.



Dickinson County EF-3 / EF-4 Tornado



Powerful tornado of May 25 damaged rural properties along a 20 mile stretch from five miles north of Solomon to five miles southeast of Chapman

Sam Sunderraj has Retired from KDHE

Bechtel Power Corporation brought my wife, Audrey, and me to Kansas in 1983, and I started with Kansas Department of Transportation in November of 1984.

Chuck Linn introduced me to landfills in March of 1989. Chuck Linn, who oversaw the migration of the open dumps to permitted landfills in the mid-70s, and Bob Kinder, the special waste person, knew every landfill in Kansas. It was truly a joy to be mentored by them and work for Chuck. In the early 90s, I covered the entire state, attending late evening Solid Waste Management Committee meetings to apprise fellow Kansans of the upcoming Subtitle D regulations. I then left the Bureau of Waste Management (BWM) for 7 ½ years during which time the BWM, under the direction of Bill Bider, successfully implemented the Subtitle D landfill regulations in Kansas and raised solid waste management to the higher plane on which it sits today.

During my four years in the Bureau of Water (BOW), Dave Waldo tasked me with working with an EPA contractor to assure Kansas was allotted its fair share of the Safe Drinking Water Act's state revolving fund moneys. I followed my time with the BOW with three and a half years managing the Water Structures Program in the Division of Water Resources of the Kansas Department of Agriculture.

June 2001 saw me back in landfills at KDHE with a new Section Chief at the Permitting helm. It was no longer the father of landfills, Chuck Linn, but the doctor of landfills, Dennis Degner, Ph.D. who completed his doctoral thesis at KU on landfill leachate in the 70s. Could a permit engineer ask for more! But more was in store. In 2007, the BWM signed up with the EPA's Landfill Methane Outreach Program (LMOP). Kansas' efforts resulted in Seward County being recognized as the Community Partner of the Year by EPA LMOP in 2008 followed by Kansas being recognized as the State Partner of the Year by EPA's LMOP program in 2009. Since 2009, BWM has encouraged enhanced waste stabilization in Subtitle D landfills as fully envisioned by the EPA RD&D rule and made bold strides towards that lofty goal. To be part of this landfill tapestry in the best state in the best country in the world (to quote my wife) is to know I am chosen.

Thank you Kansans for letting me serve you for 31½ wonderful years. It's been an honor and a privilege.



Assess Your Solid Waste Regulatory Knowledge



1. How many municipal solid waste landfills are currently operating in Kansas (include both Sub D and SAL)?
2. What materials can be accepted at a construction/demolition landfill?
3. What documents must be maintained at an MSW facility?
4. What stormwater controls must be in place at all MSW landfills?
5. When should KDHE be notified if your facility temporarily cannot meet the conditions of the facility permit due to weather events or equipment breakdown?
6. What are the training requirements for a permitted Household Hazardous Waste facility?
7. What are the 5 types of composting permits available?
8. How can a tire facility prove that a pile of tires qualifies as used tires and not waste tires?
9. What is the difference between a recycling facility and a solid waste processor?
10. How often must a municipal solid waste transfer station clean the tipping floor?

(answers on page 6)

Preventing Odors at Composting Facilities

(continued from page 2)

Screening of incoming material and public education

– The best way to deal with the problem of plastic bags at a compost facility is to ensure they never make it to the facility. Signage at the facility drop off area and reminders in city and refuse control billing statements help make the public aware that plastic bags are unwelcome at the composting facility. Training route drivers and compost facility personnel to screen incoming yard waste for plastic bags and to refuse to accept any material contained in plastic is also recommended.

Quality control and material throughput – When the material entering into a composting facility is of high quality (i.e. free of contaminants like plastics), the finished product leaving the facility has a much greater chance of being high quality as well. By having a high quality finished product, public demand and material throughput increases helping keep the facility efficient, tidy, and compliant with its permit requirements.

The Bureau of Waste Management invites composting facility personnel and managers as well as generators of yard waste and users of compost to call the composting facility permit manager Arthur Fink at (785) 296-2751 (or email to afink@kdheks.gov) with any questions regarding the above information.

Get to Know KDHE Solid Waste Staff

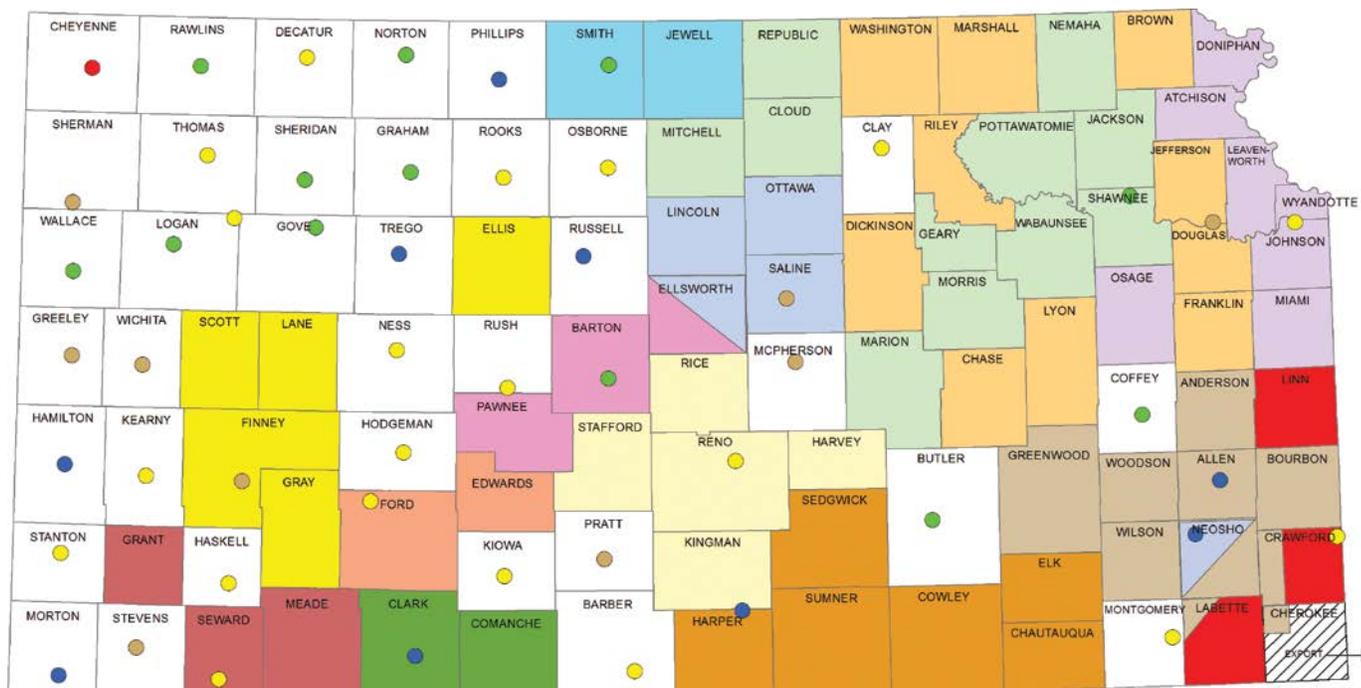
Brian Burbeck

Environmental Program
Administrator Supervisor



Position in KDHE/BWM:	Compliance, Assistance & Enforcement Unit Chief as of April 11, 2016
Education:	California State University Long Beach Bachelor in Geology 2007
Other job experience:	KDHE/Bureau of Waste Management - Environmental Scientist/Specialist Enforcement Officer, 1 year Earth Tech/AECOM - Staff Geologist Environmental Remediation, 6 1/2 years
Family:	Married 5 years; 7 year old daughter, 4 1/2 year old son
Hometown:	Downey, California
Pastimes:	Building and troubleshooting computers, researching the latest advances in the sciences, and playing games with my kids
Favorite author:	Michael Crichton
Little known fact:	The original deeds for the parcel of land that became the city of Downey, California, were established by my great-great-grandfather

MSW Regional Disposal Map with Years of Remaining Capacity



Remaining Capacity in Years

● < 8 years ● 8 - 25 years ● 26 - 50 years ● 51 - 100 years ● > 100 years

Quiz Answers*

(continued from page 4)

1. *Answer:* 51
2. *Answer:* Only materials meeting the statutory definition of C/D wastes. (see K.S.A. 65-3402(u))
3. *Answer:* See K.A.R. 28-29-108(q) for list of documents
4. *Answer:* Berms or other structures to prevent run on to the active face and control runoff. (see K.A.R. 28-29-10(j) Policy 02-03 related to Flexibility for Complying with Litter and Run-on/Runoff Controls Regulatory and Permit Requirements at Municipal Solid Waste Landfills April 29, 2002)
5. *Answer:* As soon as possible after the event. (see General Conditions attached to the permit)
6. *Answer:* Initially 24 hours training and then 8 hours annually as a refresher. (see K.A.R. 28-29-1102(e))
7. *Answer:* Yard waste, Livestock, Manure, Source-separated Organic Waste, and Municipal Solid Waste. (see K.A.R. 28-29-25(a) through K.A.R. 28-29-25(f))
8. *Answer:* By having records showing sales of at least 75% of the current inventory in the previous 12 months. (see K.A.R. 28-29-28a)
9. *Answer:* A recycling facility only accepts recyclables (K.S.A. 65-3402(r)) and only incidental amounts for recycling. A solid waste processor accepts mixed solid waste and processes the waste to recover separated materials and/or make products. (see Policy 2011-P3 related to Solid Waste Processing vs. Recycling effective February 8, 2011)
10. *Answer:* Each day that trash is received the floor must be cleaned. (see K.A.R. 28-29-23a(c)(13))

* All referenced statutes, regulations, and policies can be found on the BWM web site <http://www.kdheks.gov/waste>

Special Waste

(continued from page 1)

Kansas regulations establish all requirements for requesting a special waste disposal authorization, for the landfill's acceptance of the waste, and for the transportation and disposal operations (see K.A.R. 28-29-109).

KDHE has a Technical Guidance Document (HW-2011-G1) to assist generators in determining whether a waste is "hazardous" and thereby ineligible for disposal as a special waste. A waste determination can be based upon laboratory testing or thorough knowledge of the process used to generate the waste. Applicable lab tests should be based upon good familiarity with the industrial chemical products used in the process that generated the waste.

In 2015, a total of 503,774 tons of special waste was disposed of at Kansas municipal solid waste landfills. 1,785 special waste disposal authorizations were issued with 139 amendments.

Non-hazardous liquids (a form of special waste) are now allowed into Subtitle D landfills which have geosynthetic liners. The landfills accepting non-hazardous liquids are required to amend their operations plan and follow appropriate management standards. The application form to request approval for liquids disposal (SW650a-Generator Liquid Waste Profile Sheet) can be found on our Bureau of Waste Management webpage at: kdheks.gov/waste

There are currently six Subtitle D landfills in the State of Kansas that have amended their operating permits to accept non-hazardous liquids. Approval was authorized for the disposal of 6,765,854 gallons and 56,000 tons of non-hazardous liquids in 2015.

If you have any questions regarding special waste, please contact Tony Guy with the Bureau of Waste Management at 785-296-0681 or tguy@kdheks.gov

Permitted Facilities by Type

Permit Type	No.
Composting	178
Construction/Demolition Landfill	97
Household Hazardous Waste	87
Incinerator	1
Industrial Landfill	33
Landfarm	2
Mobile Tire Processor	7
MSW Small Arid Landfill	33
MSW Sub-Title D Landfill	18
Solid Waste Processor	24
Tire Monofill	20
Tire Processing Facility	17
Transfer Station	66
Total	583

EPA Stormwater Enforcement

(continued from page 2)

If you have not already evaluated your existing NPDES stormwater permit and plan and determined whether you are complying with all requirements, we strongly recommend that you do so as soon as possible to lessen your enforcement liabilities. If you have never obtained a permit, we recommend that you proceed to obtain one from the KDHE Bureau of Water (BOW). A guidance document prepared by BOW can be viewed on the BWM webpage (<http://www.kdheks.gov/waste/forms/solidwaste/stormwaterruleswfacilities.pdf>). Questions regarding these rules and their applicability to your facility should go directly to BOW.

To the best of our knowledge, most solid waste facilities were not fully complying with these stormwater requirements just a few months ago. Hopefully, many facilities have modified operational practices to carry out the necessary administrative functions related to inspections, recordkeeping, and training. Since EPA's stormwater inspection initiative which includes solid waste facilities is likely to continue, it would be wise to ensure compliance.

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Calendar Items

Oct 5-6

SWANA/KDHE Solid Waste Management
Conference and Operator Training Course -
Mulvane, KS



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