

Solid Waste UPDATE



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NR Hamm Material Recovery Facility Lawrence, Kansas

by Jeff Walker, Bureau of Waste Management

The Hamm’s Material Recovery Facility (MRF) opened its doors northeast of Lawrence and began processing recyclables in October 2014. The MRF receives recyclables primarily from Lawrence and Emporia but also from communities in Jefferson and Leavenworth counties.

The MRF receives approximately seven tons of material an hour. Employees utilize the latest in recycling equipment to separate into marketable commodities.

A problem that most MRFs confront is material contamination. Mr. Charlie Sedlock, Hamm’s Landfill and MRF Manager, stated that an education program was implemented in Lawrence prior to the startup of the curbside service. In the beginning recycling haulers would inspect curbside pickups for green waste, food waste, and any other material that is considered non-recyclable. Contaminated recyclables take additional time for workers to separate, cause odor issues, and may damage the equipment reducing efficiency and costing more money to process. There are still items that must be removed from the recycling material but Mr. Sedlock indicated that they have been able to market many of those items that many MRFs would have sent to the landfill.



Worker safety is an important aspect at the Hamm’s MRF. Workers receive comprehensive safety training prior to ever walking up the steps to their work stations to begin separating recyclables. Management meets daily with workers to review and remind workers of how to conduct their jobs safely. The MRF voluntarily shuts down one day every two

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Coal Ash Plan and Regulations

by Christine Mennicke, Bureau of Waste Management

The February 2015 issue of this newsletter contained articles about EPA’s new regulations on coal ash, or “coal combustion residuals” (CCR), and possible inclusion of CCR provisions in the Kansas Solid Waste Management Plan. EPA’s CCR regulations, which are effective October 19, 2015, set standards for the management and disposal of CCR in surface impoundments and landfills at coal-fired power plants. This rule is self-implementing and will go into effect whether or not a state decides to adopt and enforce the new requirements. Kansas facilities that are subject to the CCR rule are listed in the accompanying table. KDHE has been working with the affected facilities to ensure they are in compliance with the rule by the October deadline.

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Disposal of NORM and TENORM Waste

by Stephanie Fackrell, Bureau of Waste Management

Naturally occurring radioactive material (NORM) is material that is radioactive in its natural state. An example of NORM waste is the cuttings from a well that was drilled through rock that contains NORM. Technologically enhanced NORM (TENORM) means NORM that has increased concentrations of radioactive atoms (radionuclides) as a result of human activities. An example of TENORM waste is oil field pipe that contains radioactive scale.

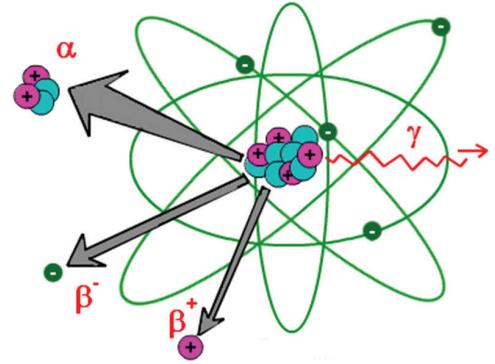
Prior to 2015, NORM and TENORM (NORM/TENORM) waste was considered low-level radioactive waste (LLRW), and was prohibited from underground disposal in Kansas. This waste was required to be disposed of at a licensed commercially operated

LLRW disposal facility. There are only two facilities in the United States that accept LLRW from Kansas; one facility is in Utah and the other facility is in Texas.

In 2015, Senate Bill 124 was approved, which specifically removes NORM/TENORM waste, at concentrations and from sources to be established by the Kansas Department of Health and Environment (KDHE), from the LLRW classification. This authorizes KDHE to develop regulations to allow the disposal of NORM/TENORM waste in permitted municipal solid waste landfills (MSWLFs) at concentrations that will be protective of human health and the environment.

These new regulations will provide a practical and safe

alternative disposal option for NORM/TENORM waste. The cost (including transportation and disposal facility charges) to dispose



of waste at a LLRW disposal facility is significantly higher than the cost to dispose of solid waste at a MSWLF.

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2015 - A Quiet Year for Natural Disasters

Has Your County Developed a Practical Debris Management Plan?

by Bill Bider, Director, Bureau of Waste Management

While 2015 has been generally wet across much of Kansas, we appear to have made it through 2015 without any major debris-generating storms including blizzards, ice storms, tornados, or floods. Over the past three years, the Baxter Springs tornado in April 2014 has been the only major tornado in Kansas.

Following the devastating Greensburg and Chapman tornados of 2007 and 2008, disaster training and planning increased at the state and local levels. The Kansas Division of Emergency Management (KDEM) and Kansas Department of Health and Environment (KDHE) developed a state debris management plan and some counties developed their own county plans; however, most counties did not develop practical debris management plans to address possible disaster scenarios that could generate large volumes of debris.

If your county has never developed a debris management plan, perhaps this winter would be a good time to do so. The state debris plan provides some good guidelines for a local plan, but based upon my experience responding to the past 10 major tornados in Kansas (and Joplin, MO), I would recommend focusing on a few very practical questions and concerns. If a county has addressed these points, response efforts can proceed more quickly if a disaster ever strikes:

1. Consider debris management needs for each city within the county. For a major disaster, it is desirable to have a disposal facility within 10 miles of the disaster site. For a minor disaster, longer haul distances are more feasible.



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Old City Dump Inventory Reveals Need for Extensive Repairs

by Tim Wilson, Bureau of Waste Management

During the summer of 2015, the Bureau of Waste Management (BWM) hired two interns to assist in the evaluation of hundreds of old city dumps that closed at least 40 years ago. Dump sites were inspected to determine overall condition and the need for corrective measures to minimize risks to public health and the environment. Conditions at many sites had deteriorated over the years due to erosion, severe storms, and settling. Illegal dumping has also occurred at several sites over the years.

It was determined that about one in every four old dumps needs some kind of corrective measures. Preliminary estimates indicate that the cost to make the necessary repairs at the 166 dump sites needing work will exceed \$4 million dollars (current dollars). This amount could increase significantly as more details are

learned about each site and due to inflation because the repairs will take place over a multiple year period.

Several new sites were identified during the 2015 assessment as compared with the first inventory prepared in the early 1990s. More accurate GPS data was also obtained for all sites.

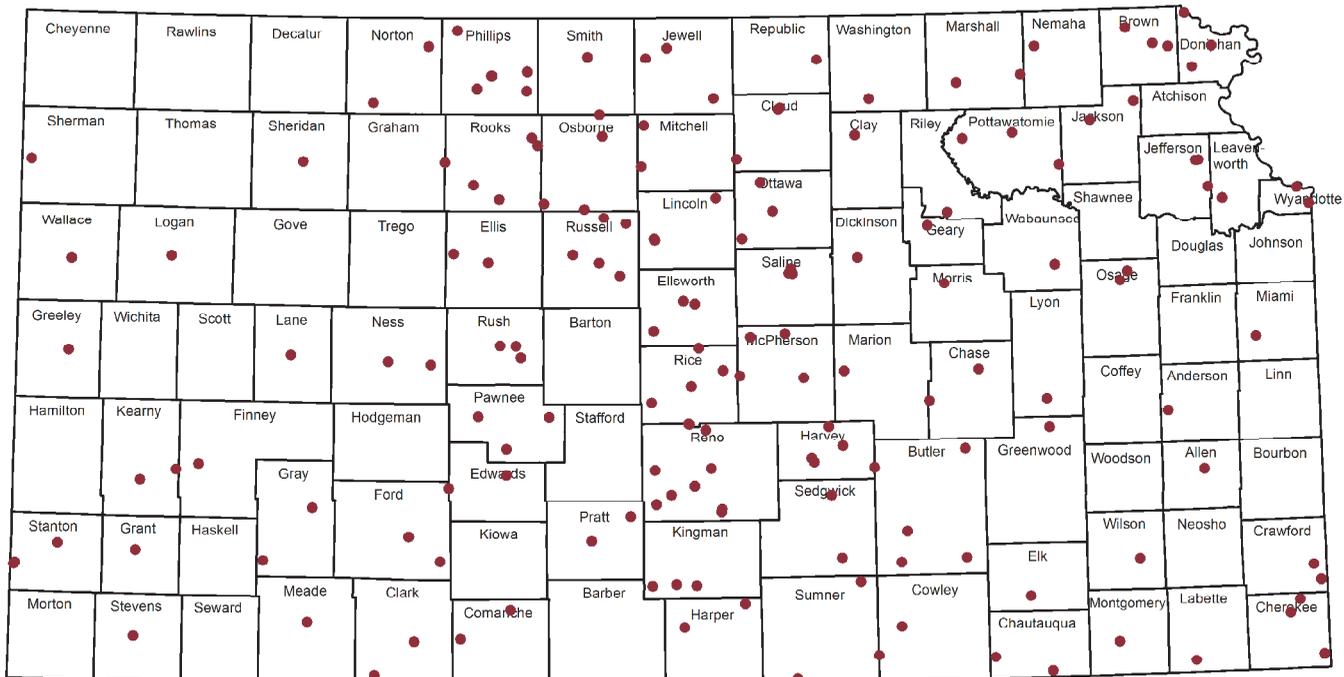
To determine a repair priority list, each dump site was scored with respect to its risk to public health and the environment. Site-specific information is entered into a spreadsheet that calculates a score based on risk. The scoring system takes many factors into consideration including potential impacts to groundwater and surface water, as well as public

safety. The final scores derived from our preliminary evaluations produced a list of High Priority sites that need immediate attention and other low



priority sites that require less time-sensitive repairs. It is uncertain as to whether KDHE will have adequate funding to carry out the repairs at these dump sites over the next decade.

City Dumps in Need of Repair



Coal Ash

(continued from page 1)

Unlike other environmental programs, EPA cannot delegate authority to a state to run the CCR program in lieu of EPA or even officially approve a state CCR program. EPA has determined that the best way to demonstrate that a state is regulating CCR in a manner consistent with the federal regulations is through EPA approval of a State Solid Waste Management Plan which addresses CCR.

In response, KDHE has prepared the “State of Kansas Coal Combustion Residuals Part 256 Plan” which explains the approach KDHE will take to assess compliance with and enforce the CCR rule in Kansas. KDHE will be writing state regulations which adopt the federal rule, but it would not be possible to accomplish this by the October 2015 deadline. Therefore, until the regulations are adopted, KDHE will enforce the standards of the CCR rule through existing laws and regulations and permit conditions.

A hearing on the CCR plan was held in Topeka on September 28, 2015 following a 30-day public comment period. It is KDHE’s goal to receive EPA approval of the plan close to the time the federal regulations go into effect, and to adopt state CCR regulations over the next 12 to 18 months.

CCR Disposal Sites Subject to New Federal Regulations

Facility	Type*
Kansas City - BPU (2 facilities)	SI & LF
KCPL - La Cygne	SI & LF
Sunflower - Holcomb	LF
Westar - Jeffrey	SI & LF
Westar - Lawrence	SI & LF
Westar - Tecumseh	SI & LF
*SI - Surface Impoundment LF - Landfill	

Using the Population Method to Report Tonnage

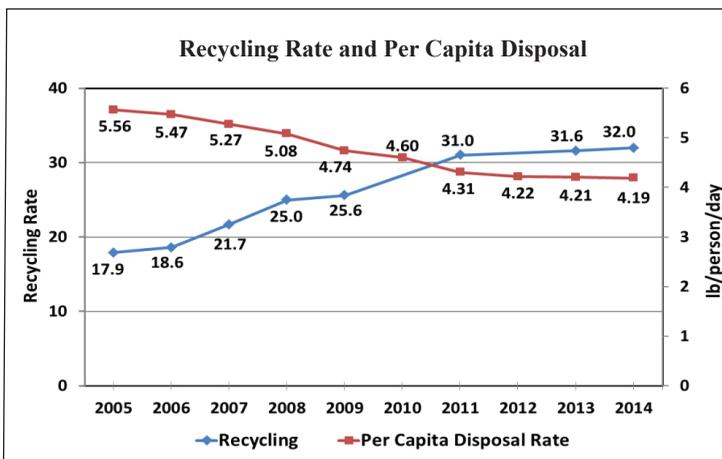
by Candy Williamson, Bureau of Waste Management

Most landfills in Kansas use scales to weigh the trash or municipal solid waste (MSW) that is disposed of in the landfill. Some landfills in Kansas aren’t equipped with scales, so they must use another method to calculate the MSW tonnage. The operator of an MSW landfill can estimate the tonnage by using volume records based on daily logs; another option for small landfills is the population method of reporting. If the landfill serves one county (or other identifiable population) of less than 20,000 people they may be eligible to use this option.

Operators estimate MSW tonnage by using a per capita waste generation rate of .8 ton per person per year.

Landfills are required to report all waste that is placed in the landfill. If a landfill

using the population method receives any non-MSW or any out-of-area MSW, they must estimate the tons by using volume records based upon daily logs or another approved method. Examples of non-MSW that needs to be reported separately are construction and demolition waste and waste that requires a special waste disposal authorization. Currently, there are ten small arid Kansas landfills in western Kansas that use the population method to report their MSW tonnage.

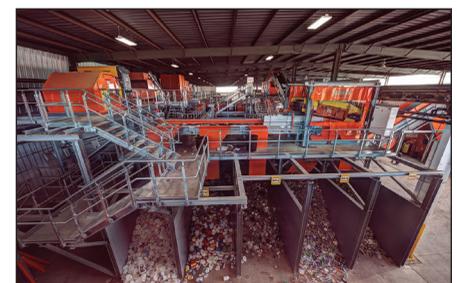


N R Hamm

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weeks for routine maintenance which can prevent extended down times due to major equipment repairs. Many of the Hamm employees are cross trained in maintaining the equipment which expedites repairs and keeps the MRF operating as efficiently as possible.

Operating a MRF in times of fluctuating commodity prices can be a challenge. MRFs must operate as efficiently as possible and produce a clean product to remain profitable. Mr. Sedlock indicated that sometimes it is necessary to be creative to find markets for all recovered material but as long as a clean product is generated, markets are available for all recyclables.



SWANA/KDHE Annual SWM Conference and Operator Training Course

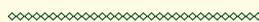
On October 21-22, the SWANA Kansas “Sunflower Chapter” and KDHE will host the annual SWANA/KDHE Solid Waste Management Conference and Operator Training Course at the Prairie Band Hotel/Casino and Conference Center, Mayetta, Kansas. The keynote speaker will be David Biderman, Executive Director of SWANA International and national expert on best safety practices in the field of solid waste management. Bill Bider will be providing his annual “State of Solid Waste in Kansas” presentation. The first day will include a presentation and tour of Waste Management’s Rolling Meadows Landfill, Waste to Energy Complex and Materials Recycling Facility.

The conference will have three tracks – MSWLF, Collection & Transfer Station, and SAL & C&D Landfill. National and state experts will give presentations on – Innovations in LFG Well Flow Control & Dewatering System, Baler & Balefill Operations, Emission Sampling for PCC Decision Making, Use of Drones at Landfills, Best Safety Practices in Hauling and Landfill Operations, Transfer Station Tipping Floor O&M, SAL Operations and Updating Your Permit Documents, Compliant C&D Landfill Operations, CQA – Building it Right with Proper Approval and Recommendations for Following Your Facility Operations Plan. We look forward to seeing you again at another great conference and training course.

Get to Know KDHE Solid Waste Staff

Mike Selm

Professional Environmental Engineer



Position in KDHE/BWM:	Unit Chief, Solid Waste Landfills Unit Solid Waste Permits Section
Birthplace:	Salina, Kansas
Academic:	B.S. Civil Engineering, Kansas State University B.S. Geology, 1984 M.S. Civil Engineering Kansas State University, 1993 MBA Washburn University, 2004
Other job experience:	Worked at the Kansas Dept of Transportation 20 years before coming to KDHE in 2005
Family:	Wife, Diane
Favorite pastime activities:	Spending time with my family, attending sporting events, coaching, golf, scuba diving, reading, and visiting museums
Favorite foods:	Breakfast buffets, steak, and Mexican
Favorite quote:	“I skate to where the puck is going to be, not where it has been.” -- Wayne Gretzky

Common Violations at Permitted Solid Waste Facilities

by Rebecca Wenner, Bureau of Waste Management

The following tables show the most common violations observed at municipal solid waste landfills (MSW), construction and demolition landfills (C&Ds), and transfer stations during the past year.

There are unique problems for each of these types of facilities. C&D Landfills commonly have unauthorized waste and waste screening issues (33 violations cited). MSW landfills can have working areas that are too large or lack adequate compaction (6 violation cited). Transfer stations often fail to clean their facility as described in their operating plan, or as required by regulation (8 violations cited).

Some amount of cover is required at all types of landfills. The lack of adequate cover, or failure to maintain adequate cover, is a common violation at both MSW and C&D landfills. Cover is used at MSW landfills to reduce vectors, fire potential, litter, and odors, and is used at C&D landfills to reduce fire potential and reduce litter.

Recordkeeping requirements vary between the different types of facilities. These include documentation of personnel training; logs of waste screening, cover applications, rejected loads, tonnage received, leachate disposal (not applicable to all landfills), gas monitoring; and other documents that may be specific to a facility type or even site-specific. These records are important to document that the facility is following all requirements of their individual permit and the regulations.

Every facility must manage water, which can include leachate, storm water, and contact water. Any water that comes in contact with trash is going to be either contact water (transfer stations and C&D landfills) or leachate (MSW landfills). Each MSW is required to minimize the amount of leachate it generates by maintaining a reasonably sized working face,

maintaining their storm water controls, and designing their landfill to minimize or prevent run-on of stormwater into the active cell by either grading or using diversion berms. Small Arid Landfills (SALs) are exempt from the requirement to collect their leachate, but they are still required to prevent their leachate from mixing with stormwater that may be released off-site. C&D landfills should minimize the amount of contact water generated to prevent it from filling in their working area, and they must prevent stormwater from mixing with contact water to prevent contact water from being released off-site. Transfer stations must collect their contact water and prevent it from being released off-site as well.

Good training programs can prevent most of the violations cited. It is imperative that all employees be familiar

MSW/SAL

Violation Category	Number of Times Cited
Cover	26
Water Controls	10
Large Working Face/Compaction	6
Litter	5
Security/Access	5
Recordkeeping	4

with the facility's operating plan and permit requirements as well as the contingency plan. In many cases, KDHE finds significant violations during an inspection, most of which could have been prevented if the employees had followed the facility's contingency plan for catastrophic events.

Common violations also relate to access and litter control. Litter is generally controlled by good cover, small active areas, good compaction, and enforcing policies on covered loads. Moving to a lower or sheltered area or shutting down during high wind events is also very effective. Security/access issues usually involve unlocked gates, and signs that are faded, damaged, or out of date.

Every violation is preventable by closely following all permit conditions and the regulations and by maintaining good communication with KDHE. Employees should be trained and plans should be revised as necessary to include new or changing site activities. KDHE should always be notified immediately (or the next business day) when an event happens at a permitted site, including severe weather, that causes significant damage and/or prevents the facility from complying with a regulatory or permit requirement. The notification should be made to the KDHE permit manager, who will notify all appropriate KDHE personnel including district staff and management.

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Violation Category	Number of Times Cited
Unauthorized waste & waste screening	33
Cover	12
Recordkeeping	14
Training	6
Security/Access	2
Contact Water	2
Litter	2

Transfer Station

Violation Category	Number of Times Cited
Cleaning	8
Recordkeeping	5
Training	5
Water Management	3
Litter	2
Security/Access	2

Avian Influenza Presents Waste Management Challenges

by Ken Powell, Bureau of Waste Management

Have you noticed the price of eggs has gone up dramatically in the last few months? If you have not then you are like me and someone else does the grocery shopping. The price has almost doubled due to the loss of production of eggs from chickens that either died or were killed over the last year because of Avian Influenza (AI). The total number of chickens and turkeys that were lost to AI in this outbreak was well over 49 million. Iowa is the largest producer of eggs in the US with some 50 million laying hens in the state. They lost over 29 million laying hens and it will take up to three years to replace these birds.

There are 144 different types of AI that can display symptoms from a mild fever to 85+% death loss in both chickens and turkeys. The higher death loss types are classified as Highly Pathogenic (HP). AI is carried by migratory waterfowl and some other bird species which makes the spread hard to control. Kansas had one small backyard flock of around 15 birds that showed symptoms of the HP type of AI and also had a turkey flock with a low path type. The backyard flock was taken to Kansas State University and disposed in their alkaline digester. The turkeys were buried on-site under an emergency disposal authorization (K.S.A. 65-3407c(a)(5)). While the turkeys with the low path type of AI did not have to be destroyed the state of Missouri would not let them cross over the state line to the processing facility. The facility was left with no alternative other than to euthanasia and disposal.

The Bureau of Waste Management (BWM) is coordinating closely with the Kansas Department of Agriculture Division of Animal Health (DAH) to assure efficient plans for disposal if HPAI is detected in the bird flocks in Kansas. DAH will be the lead agency in any AI emergency and KDHE will have the role of helping design and approve a disposal facility. DAH and BWM have met with the largest poultry facility in the state to discuss their plans for all aspects of an outbreak including their disposal plan. Meetings are in the planning stages with other facilities.

These facilities most likely will plan to use burial sites because of the potential need to quickly dispose of the carcasses. Most of the largest poultry producers have a pre-selected disposal site approved which will speed the disposal process. Composting will also be an option if enough carbon is readily available.



2015 - A Quiet Year

(continued from page 2)

2. Evaluate the capabilities of permitted solid waste facilities within the county to handle various disaster scenarios.
3. Consider the availability of reopening old closed landfills to dispose of debris.
4. If permitted or closed sites are not good options, identify other property owned by a city or the county that could be used for a new emergency landfill.
5. Identify city or county property that could be used as a debris management complex (staging, processing, recycling, etc.). Traffic flow to the facility as well as in and out must be considered.
6. Identify local government staff that would assume debris management duties (site and load monitoring, operations, collection, volunteer and owner education, etc.).

When planning and during implementation, you will be working with KDHE to obtain approval, permits, etc. The time to prepare is before an emergency happens, not after. Let us know if you would like to discuss your ideas with us to help you be ready if a disaster occurs.

NORM and TENORM

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The topic of NORM/TENORM disposal is relatively new and information regarding this complex issue continues to emerge. For example, last month KDHE staff attended national radiation and solid waste meetings where the management of NORM/TENORM waste was discussed. In addition, a new report, *Review of TENORM in the Oil & Gas Industry*, was recently published by the Conference of Radiation Control Program Directors. KDHE will be reviewing available information to assist with the development of the new regulations.

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Calendar Items

Oct 21-22, 2015	SWANA/KDHE Solid Waste Management Conference and Operator Training Course - Mayetta, KS
Dec 1, 2015	Green School Grants and Waste Tire Grants open
Feb 1, 2016	Waste Tire Grants application postmark deadline
Feb 15, 2016	Green School Grants (online) application deadline
Apr 5-7, 2016	2016 WORKS! Conference Garden City, KS



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