Kansas Department of Health & Environment

Solid Waste UPDATE

Vol. 13 No. 1 July 2008

In This Issue . . .

Westar Lawrence Energy Center 1
Recycling Rate Increases 1
Update to C&D Landfill Regulations 2
Wood Waste Management in Kansas.....2
E-Waste Collection Centers 3
Grants for Green Schools 3
Landfill Operations "Tip".....4
Top Ten Transfer Stations by Tonnage 4
Get to Know KDHE Solid Waste Staff.....5
KOR Announces New Recycling Web Site.....6
Kansas Debris Management Plan.....6
Calendar Items.....8

Get Caught!™

The New Westar Lawrence Energy Center Landfill

by Juan Sexton and Sam Sunderraj, Bureau of Waste Management

Westar's Lawrence Energy Center has a newly designed industrial landfill to manage the disposal coal combustion waste (CCW), coal combustion products (CCP) or coal combustion byproducts (CCB) from the energy center. The waste streams from this coal-fired power plant consist of bottom ash, fly ash, and scrubber solids. These wastes are managed in a slurry form that is deposited in separate settling ponds that are regulated by KDHE's Bureau of Water.

Coal combustion products settling pond.

The ponds are used to separate the solid wastes from the water with which they are mixed. The solids in the settling ponds are dredged from the ponds by a dragline and deposited in windrows along the banks for further drying. The bottom ash has a beneficial use in the construction of roadbeds in and around the power plant and fly ash has a beneficial use as an additive to concrete and to stabilize expansive soils. Unused CCP are disposed as solid waste in the landfill.

Coal combustion products disposal

The landfill at the Lawrence Energy Center is designed with a bottom drainage layer of sand. Any contact water that may be collected in the drainage layer is conveyed in pipes and a perimeter drainage swale that conveys the contact water to a high density polyethylene (HDPE) lined contact water pond from which it is pumped and managed as wastewater.

Managing industrial waste at a coal-fired power plant takes a partnership of the power plant staff working in conjunction

(continued on page 2)

Recycling Rate Continues to Increase in Kansas

by Candy Williamson, Bureau of Waste Management

Keep it simple, encourage participation, and conduct positive follow up. That was the methodology used for the 2007 Kansas Recycling Survey.

The survey was mailed out the first week of February with a due date of March 1. The mailing list consisted of 728 potential recycling facilities. The list was taken from three sources: 1) Kansas Business & Industry Recycling Program (BIRP) directory, 2) Kansas Department of Health and Environment (KDHE) recycling grantees, and 3) the KDHE Solid Waste Database. The EPA guidelines for measuring recycling were followed to provide for standardization in the development of the survey and the calculation of the recycling rate.

This year, the response rate was 56 percent. Because we do not get 100 percent response, we can assume that more recycling is done but

(continued on page 4)

Gas Generation Potential Necessitates Update to C&D Landfill Regulations

by Bill Bider, Director, Bureau of Waste Management

A few years ago, the Bureau of Waste Management (BWM) realized that C&D landfills have the potential to generate significant quantities of two potentially dangerous landfill gases: hydrogen sulfide (H2S) and methane. One quarry landfill in Johnson County, APAC-Kansas, Inc., has faced numerous challenges over the past few years related to the collection and monitoring of these gases to minimize risks to employees and the public.

The Kansas Department of Health and Environment (KDHE) recognizes that the conditions that led to the gas generation problems at the APAC-Kansas site are not totally unique to that facility. Quarry landfills that receive significant amounts of gypsum wall-board waste and other organic materials appear to have the greatest potential to generate gas because these sites typically have very low permeability bottoms. This can result in a "bathtub effect," if stormwater is not properly managed. The result can be a wet or saturated waste mass that becomes anaerobic, the necessary condition to produce H2S and methane. It is possible for such an effect to exist in other geological settings. Regardless of the setting, the potential generation of dangerous gases at C&D landfills warrants an update to the C&D regulations to address related design and operational requirements to minimize risk to public health and the environment.

Upon completion of the draft regulations, KDHE will share the draft with C&D landfill permit holders, the Kansas Landfill Association, and engineering firms that serve as consultants to permit holders and applicants. This will be an unofficial feedback step before officially proposing the regulations for public comments. The preliminary draft should be available by mid-summer 2008. The rest of the regulation adoption process will take many more months to complete. While that process goes on, KDHE must address any gas generation issues that arise at C&D landfills through enforcement actions or cooperative agreements with facility owners.

Wood Waste Management in Kansas

by Ken Powell, Bureau of Waste Management

More businesses in Kansas are looking to "Go Green" and one way is to divert their wood waste from the landfill. Until just a couple of years ago, this practice was limited to businesses that wished to process only their own waste. They typically bought or rented a grinder to make mulch or other products. These businesses were mainly pallet manufacturers and cabinet shops that saw this "recycling" activity as a way of saving money on disposal and generating revenue through the sale of mulch.

More recently, wood recycling has expanded and businesses have formed to commercially process wood waste generated by many sources.

The Kansas Department of Health and Environment (KDHE) began to notice large piles of wood waste were accumulating at some of these facilities and were not being promptly processed. It was decided that all wood processing activities should be

(continued on page 7)

Westar Lawrence Energy Center Landfill

(continued from page 1)

with KDHE's Bureau of Waste Management and Bureau of Water. The management of the CCW is further complicated by the efforts of the power company to develop, produce and sell CCP or CCB. By working together in a cooperative partnership, DHE and Westar can provide clean energy, a safe environment, and cost effective energy to the citizens of Kansas.

Get Caught!™

KDHE Mission:

As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans.

E-Waste Collection Centers Established through KDHE Grants

by Kris Hicks, Bureau of Waste Management

Eight grants were awarded in Round 16 of the Competitive Plan Implementation grant program in 2007 to fund the establishment of E-waste collection centers serving 65 counties. Each grantee will set up a collection center following the BWM E-waste standards and use only permitted E-waste processors or other approved downstream vendors. The standards address general operations, inventory control, data security measures, a set hierarchy of management options, and reporting requirements.

Grantees must submit monthly data reports on the type, quantity, and weights of materials collected, reused locally, or sent for processing. Two years of eligible operating expenses will be reimbursed by KDHE including the cost of shipping and recycling. Grantees will also receive five cents per pound for all handled E-waste. The maximum amount of operating funds received is $150,000/year per grantee. Some initial highlights of the program follow:

- The first collections started in Seward County in February 2008.
- Seward County processed 363 E-waste pieces that were on-hand in Meade County, and have collected 242 pieces in February and March. The county provided materials to each participating county including pallets, Gaylord boxes, and shrink wrap along with instructions.

(continued on page 7)

Does your city, county, or company have a Green Team?

Check out kansasgreenteams.org

or contact Rodney Ferguson 785-291-3746 or rferguson@kdhe.state.ks.us to get one started

Grants for Green Schools

by Rodney Ferguson, Bureau of Waste Management

The Bureau of Waste Management (BWM) is excited to announce a new program designed to improve waste management practices in Kansas schools and to encourage students to be good environmental stewards. Building on the successful state agency ***Green Teams*** program, the ***Kansas Green Schools Initiative*** will feature a grant program designed to help schools implement specific 'green' practices such as recycling, composting, waste reduction and decreased dependency on potentially hazardous chemicals in cleaning supplies. Projects will include the direct involvement of students, with teachers incorporating the importance of the projects into educational learning opportunities.

The Kansas Green Schools Initiative is a ground breaking outreach effort by the Bureau of Waste Management and the Division of Environment as it will incorporate multimedia environmental issues. In addition to waste management issues, additional environmental topics will receive specific focus from the bureaus of Air and Radiation, Water, and Environmental Remediation. Examples of energy saving and air and water pollution reducing projects may include: replacing incandescent light bulbs with fluorescent fixtures, retrofitting water outlets with low/reduced flow fixtures and reducing idling times for school bus engines.

Assistance with program administration will be through the Kansas Association for Conservation and Environmental Education. Schools will be directed to the Kansas Green Team Schools Web site to access information including grant application forms and guidance material. The program is scheduled to be ready to go this fall with schools submitting applications for specific grant funded projects. A future goal of the program is to potentially identify qualifying schools as "Certified Green Kansas Schools."

This initiative is designed to complement the bureau's ongoing outreach programs to Kansas youth. Because many of our lifestyle behaviors and beliefs are formulated while we are children, the bureau has focused several education and outreach efforts towards this population segment over the past decade. These efforts include distributing ***'Kansas Kids Can'*** to all 4th graders in Kansas, sponsoring **Stan Slaughter** to conduct assemblies in elementary schools and hosting the ***'Kansas Don't Spoil It!'*** Calendar Contest for students K through 12.

Maureen Ruhlman, Education Outreach Coordinator, will be implementing the program for BWM. For questions on any of our education and outreach efforts, contact Maureen at 785-296-6596 or by e-mail mruhlman@kdhe.state.ks.us

Landfill Operations "Tip"

by Sam Sunderraj, Bureau of Waste Management

The designers have completed their job and you have a design that has been approved. The contractors have constructed the area to be used for disposal and the constructed area has been approved for disposal. Now, it is up to you and me to roll up our sleeves and start "running" the landfill. What rules apply and how can you be sure your day-to-day operations are in compliance with the requirements that apply to your landfill?

Every permitted solid waste landfill has an Operations Plan, the Facility Operations Plan (FOP). This may be a section in your permit application package, or it may be a separate document. Whatever form it is in, it must be a document that has been reviewed and approved by the KDHE Solid Waste Landfills Unit. Most operational requirements for a municipal solid waste landfill (MSWLF) are outlined in Kansas Statutes Annotated (K.A.R.) 28-29-108. Similarly, requirements for a construction demolition landfill (CDLF) are outlined in K.A.R. 28-29-308 and again in K.A.R.28-29-325(a)(3). For industrial landfills (IDLFs), the FOP will depend upon the type of industrial waste being managed and disposed.

So, let's get started.

Locate your site FOP. Compare it to the regulations noted above.

- For each section of the regulation, is your FOP clear in outlining what is expected of you, the operator?
- Will an inspector be able to confirm that you are operating in accordance with your approved FOP?

As the first review task, please look at how your landfill accepts waste.

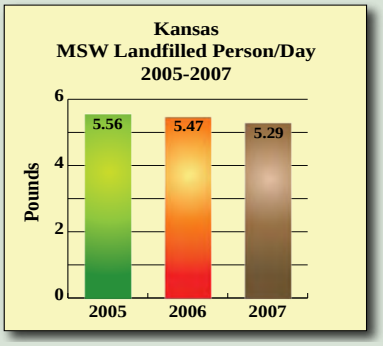
- How is the waste you received weighed or otherwise quantified?
- How is the waste screened to ensure that you only receive waste that your landfill is permitted to receive?
- Do you receive special wastes and how do you track those?
- This issue is often called the waste acceptance plan of an FOP. It is recommended that you review this part of your permit for your site, and strive to update this section of your FOP first.

Can't find your FOP or believe it needs updating? Please contact Jamie Packard at 785-296-1602 and she will direct you to your landfill permit engineer who will help guide you through this process.

Recycling Rates

(continued from page 1)

not accounted for. On those surveys where materials were handled by multiple parties, special attention was given to avoid double counting of tonnage.



A Municipal Solid Waste (MSW) recycling rate of 21.7 percent (excluding auto bodies and tires) was computed for 2007. This is an increase from the 2006 calculated recycling rate of 18.6 percent. According to the survey, the top three recycled materials in Kansas during 2007 were

- ferrous metal (293,355 tons)
- paper (231,210 tons), and
- compost (77,281 tons)

In addition to the recycling rate the Bureau of Waste Management (BWM) also calculated the pounds of MSW landfilled per person per day. This number has seen a steady decrease over the past three years.

Top Ten Transfer Stations by Tonnage - 2007

Rank	Tons Transferred	Transfer Station Name and City	Tons to Destination	Waste Destination
1	347,228	Waste Connections, Wichita	335,322	Plumb Thicket LF, Runnymede. KS
			11,906	Red Carpet LF, Meno, OK
2	124,528	Waste Disposal, Wichita	124,528	Plumb Thicket LF, Runnymede. KS
3	113,372	American Disposal Services, Galena	113,372	Prairie View LF, Lamar, MO
4	83,506	City of Olathe, Olathe	83,506	Hamm Quarry LF, Lawrence, KS
5	57,230	Deffenbaugh Industries, Wathena	55,220	Johnson County LF, Shawnee, KS
			2,010	City of St. Joseph LF, St. Joseph, MO
6	53,318	Riley County, Manhattan	53,318	Hamm Quarry LF, Lawrence, KS
7	41,013	Leavenworth County, Lansing	41,013	Hamm Quarry LF, Lawrence, KS
8	34,108	Geary County, Junction City	34,108	Rolling Meadows LF, Topeka, KS
9	32,874	Cowley County, Hackney	32,874	Plumb Thicket LF, Runnymede, KS
10	29,801	McPherson Area SWU, McPherson	1,830	McPherson County LF, KS
			16,761	City of Salina LF, Salina, KS
			11,210	Reno County LF, Hutchinson, KS

Coming Next Issue !

Debris Management Practices following Chapman and Manhattan tornados

KANSAS DON'T SPOIL IT!

Get to Know KDHE Solid Waste Staff

Juan C. Sexton
Chief
Solid Waste
Hydrogeologic
Unit

Position in KDHE/BWM:	Chief of Solid Waste Hydrogeologic Unit
Birthplace:	Salina, Kansas
Professional/Academic:	Licensed Professional Geologist Kansas State University, BS Geology
Other Job Experience:	Barnett, Stuart & Associates, Field Geologist 1972-1990 KDHE/BER, Chief, Underground Storage Tank Prevention Unit 1990-1999 Tank Management Service, Executive Vice President 1999-2007
Favorite pastime activities:	Fitness Walking, Reading, Music Listening, Making Fine Table Wine
Favorite food:	Rhubarb Pie
Person who influenced your life significantly:	My wife, Karen, who taught me that love shared only grows, to be brutally honest, to apologize when you are wrong, and that there is no truth in reality
Person dead or alive you wish you could meet:	The Dalai Lama
Book you would recommend:	Thresholds of the Mind by Bill Harris
Vacation spot you would recommend:	Paris, France (The City of Lights)

KOR Announces New Recycling Web Site

by Debra Hoepner, Executive Director, Kansas Organization of Recyclers

KOR is excited to have been chosen by KDHE to develop the new **kansasrecycles.org** Web site**,** a map driven, user friendly, comprehensive listing of all recycling opportunities in Kansas. This Web site will be active July 1, and will replace the existing Kansas BIRP Web site.

Use of the Web site is convenient: just choose the materials you want to recycle from the list and click on the map - it's that easy! All locations in the area you click will be shown. Clicking on the individual location shows detail on that listing, including a Google satellite map! The Web site also has a separate section for commercial users - collectors, brokers, and processors.

We want to include YOU on the Web site, so contact us at kskor@cox.net and ask to receive access to the test site where you can add your own location information. Once added and verified by the site administrator, it will be on the Web site. You can also change your listing anytime, giving you total control of your information.

Whether you want to drop off a few cans, are a collector, broker, or processor, this Web site is for you. We are all involved in the dynamic recycling industry, and **kansasrecycles.org** is a wonderful new tool to help everyone in Kansas recycle.

KOR is pleased to partner with KDHE's Bureau of Waste Management to provide this exciting opportunity to the people of Kansas. If you have questions, please contact Debra Hoepner at kskor@cox.net, or call 316-722-0919.

KDHE Working with Other State Agencies to Prepare Kansas Debris Management Plan

by Bill Bider, Director, Bureau of Waste Management

A series of major natural disasters in 2007 led to a major effort by several state agencies to prepare a comprehensive Kansas Debris Management Plan. The Kansas Department of Emergency Management (KDEM) is coordinating plan preparation, but KDHE has the lead responsibility in implementing most aspects of the plan. Other agencies helping prepare the plan, each with their own implementation duties, include the Kansas Department of Transportation, the Kansas National Guard, Kansas Department of Wildlife and Parks, and the Kansas Highway Patrol.

This plan will address the management of debris generated from all types of natural disasters with a focused emphasis on the three kinds of disasters that struck in 2007 including tornados, floods, and ice storms. The plan serves as a direct guide for state agencies, but will also be helpful to local governments that have the ultimate responsibility for managing debris and receiving reimbursement from FEMA when national disaster declarations are made.

Some of the key responsibilities specified in the plan relate to:

- Prompt clearing of debris from routes that are essential to emergency operations
- Estimating the amount of debris
- Determining the capabilities and resources of local jurisdictions to manage debris or to manage contractors that will handle debris
- Determining special debris management challenges based upon debris characteristics and volume
- Identifying contractors to perform special debris management tasks or to supplement the capabilities of local governments
- Ensuring that health and safety issues are being properly addressed
- Coordinating with federal agencies that can provide assistance in debris and hazardous materials management
- Performing sampling of waste, soil, or other materials to determine proper management practices and to document impacts of debris sites
- Carrying out ambient air monitoring to ensure safe operating conditions and the need for personal protective gear
- Overseeing the closure of all debris management sites

Wood Waste *(continued from page 2)*

evaluated to determine how state laws and regulations should be applied, including permitting requirements.

Three types of facilities were identified. First, there are facilities that handle only trees and brush. These facilities are mainly owned by cities and counties that either burn or grind the brush. If they burn the brush, KDHE approval to conduct open burning is required, but no permitting is required for the grinding operation. If the trees and brush are handled in a way that causes environmental concerns or if no processing occurs in a timely manner, then enforcement action is taken to correct the problems.

The second type of facility identified was the manufacturing sector. Facilities such as cabinet shops, pallet making facilities, and trailer manufacturers generate large quantities of wood waste. If they choose to carry out additional on-site processing of only their own wood waste, such as grinding to make mulch, then no permit is required. Again, if the wood waste is handled in a way that causes environmental concern, enforcement action would be taken.

The third type of facility identified receives waste wood generated by off-site facilities for processing or disposal. These receiving facilities have the opportunity to collect large quantities of diverse waste materials in a very short time. As these facilities commercially receive mixed waste from varied sources, they are considered solid waste processing facilities that require permits.

To help facilities better understand how KDHE is regulating wood waste facilities, a bureau policy was prepared in 2007. The policy "Permitting Requirements for Wood Waste Processing Facilities" is available on the web at http://www.kdheks.gov/waste/policies/BWM_07-01_WoodWasteProcessors.pdf. If you have questions about this policy, please contact Ken Powell at 785-296-1121 or by e-mail at kpowell@kdhe.

Free up your space! Recycle e-waste.

E-Waste Collection Centers

(continued from page 3)

- The Lake Region Solid Waste Authority has six counties that are working independently to recycle E-waste. Miami County processed 117 pieces that were on-hand thru March, and have collected 1128 pieces in April, including a one-day event in Louisburg that filled four semis. Franklin County collected 450 CPUs and monitors plus 3570 pounds of peripherals in April. Anderson County collected 200 pieces in April. No tonnage numbers have been submitted yet for these counties.
- Twin Valley Developmental continues to expand its current collection routes adding Mitchell, Jackson, Brown, Doniphan, and Atchison Counties. Current shipping affidavits total over 88,000 pounds using their own truck. Expansion of the building and loading dock continues to facilitate operations.
- Osborne County, dba Solomon Valley E-Waste Coalition, has purchased trailers and has planned for a temporary storage building pending the expansion of the recycling center. They have shipped over 20 tons of materials from a one-day collection in Phillipsburg.
- Butler County and Rice County are in the process of building new centers at the landfill for electronic waste processing.
- SEK Recycling has taken some important steps toward purchasing property adjacent to the recycling center. They are very anxious to start collections and have strong interest from Pittsburg State University.
- NW Kansas Regional Recycling Center is also laying the groundwork by taking steps to purchase a storage building adjacent to the current recycling center.

e.waste

Kansas Department of Health & Environment
Bureau of Waste Management
1000 SW Jackson, Suite 320
Topeka, Kansas 66612-1366

264-21

ADDRESS SERVICE REQUESTED

PRSRT STD
U.S. POSTAGE
P A I D
TOPEKA, KS
PERMIT NO. 157

Calendar Items

August 4, 2008	HW Generator Training - Kansas City area
August 12, 2008	HW Generator Training - Salina
August 14, 2008	HW Generator Training - Topeka
August 19, 2008	HW Generator Training - Chanute
August 20, 2008	HW Generator Training - Pittsburg
August 26, 2008	HW Generator Training - Wichita
August 27, 2008	HW Generator Training - Dodge City
August 28, 2008	HW Generator Training - Hays
November 12-13, 2008	MSW Transfer Station and SW Haulers Training - Junction City
March 24-26, 2009	*WORKS!* 2009 - Lindsborg

Solid Waste Update

Kansas Department of
Health & Environment

Prepared & Distributed by
The Bureau of Waste Management

Direct inquires and opinions to:
KDHE - BWM
Solid Waste Update
1000 SW Jackson, Suite 320
Topeka, KS 66612-1366

For subscription information:
Call: (785) 296-1600
Fax: (785) 296-8909
E-mail: ssegelquist@kdhe.state.ks.us