



ENVIRONMENTAL NEWS

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

MDEQ SELECTS enHance PROGRAM MEMBERS

In January, MDEQ announced the selection of the first class of members in the new enHance program. enHance is a voluntary state incentive program that encourages environmental stewardship and recognizes environmental leaders. The program showcases the environmental leaders who make a commitment to promote and implement practices that reduce waste, conserve resources, and strive for environmental excellence through continuous improvement.

“We are proud of our first class of applicants for enHance. There are many excellent facilities in Mississippi who are aware of the effect they have on the environment and their surrounding communities. We are pleased to now have a way to recognize those who go above and beyond their requirements,” said Trudy Fisher, MDEQ Executive Director.

enHance participants may choose to apply as an Associate, a Steward, or a Leader. The members of the first class of Leaders are:

- Baxter International – Cleveland
- Eka Chemicals – Columbus
- Haworth, Inc. – Bruce
- Hunter Douglas – Tupelo
- International Paper – Redwood
- Nucor and General Recycling - Flowood



One facility was chosen as a Steward:

- DTE Petcoke – Vicksburg

The MDEQ Newsletter will feature one of the new members each month. The opening of applications for the next enHance class will begin July 1, 2009.



Following are questions and responses with Baxter Healthcare about their participation in enHance.

1. Why did Baxter apply for the enHance program?

Baxter International Inc.'s commitment to sound environmental stewardship spans more than three decades, dating back to 1977, when it established a formal environmental program and policy. Baxter's Cleveland, Miss., facility applied for the enHance program to further its recognition for operating a proactive environmental program in the local community.

Continued from page 1

2. How is membership beneficial for your company?

Baxter pursues voluntary programs such as enHance because they are based on the premise that environmental programs should go beyond complying with government regulations to strive for continual improvement. Operating a proactive environmental program rather than a compliance-based program helps reduce Baxter's regulatory burden and yields savings for the company. Baxter's proactive program also produces savings and other benefits that are not easily measured, such as increased good will, reputation, brand value, increased sales, and improved employee morale.



Baxter facility in Cleveland

3. What steps has your company taken to be more environmentally friendly? Why?

Baxter has been incrementally improving its environmental performance for many years. For an in-depth discussion, see the Environment, Health and Safety section of the company's annual sustainability report at:

<http://sustainability.baxter.com/EHS/index.html>

4. How are you involved in the Cleveland community?

Baxter's Cleveland facility is involved in the City of Cleveland and Bolivar County community through a number of organizations. Baxter employees are members of the local Chamber of Commerce, United Way and Park Commission. The Cleveland facility, along with the Mississippi Department of Environmental Quality, the City of Cleveland, Bolivar County and the Cleveland-Bolivar County Chamber of Commerce sponsor Bolivar Earth Day each year. This is an annual event that has been held for 14 consecutive years that gives area residents the opportunity to properly dispose of all types of wastes.

5. Would you recommend enHance to others?

Baxter would recommend enHance to others. Proactive, voluntary programs like enHance are making a strong contribution to building the foundation for sustainable environmental progress in this country. Programs like enHance create forums wherein members that demonstrate strong environmental performance raise the bar for others.

6. Tell us about Baxter Healthcare. What do you manufacture? How many employees? How long has the facility been in Cleveland?

As a global, diversified healthcare company, Baxter applies a unique combination of expertise in medical devices, pharmaceuticals and biotechnology to create products that advance patient care worldwide. At year-end 2007, Baxter employed approximately 46,500 people worldwide. At the company's Cleveland, Mississippi plant, approximately 800 employees have been making medical products such as IV administration sets and irrigation solutions since 1950.

MMA

Mississippi Manufacturers Association



one-day

SEMINAR

www.mma-web.org

enHance the Environment & Your Bottom Line **Energy Management Tools for Sustainability**

This workshop, sponsored by The Mississippi Department of Environmental Quality and the Mississippi Manufacturers Association, promotes continuous energy improvement for industrial facilities.

Continuous improvement through an energy management system promotes energy efficiency, minimizes environmental impacts and is critical to the current and future economic success of manufacturers.

Who should attend?

Anyone interested in managing energy for greater profitability and enhanced environmental benefits.

Agenda

| | |
|------------------|--|
| 8:30 - 9:00 a.m. | Registration |
| 9:00 - 9:15 | Introduction |
| 9:15 - 9:45 | Conducting a No-Cost Facility Energy Audit |
| 9:45 - 10:15 | Top 10 Energy Saving Opportunities for Industry |
| 10:15 - 10:30 | Energy Efficiency with Combined Heat & Power (CHP) |
| 10:30 - 10:45 | BREAK |
| 10:45 - 11:15 | Benefits of an Energy Audit – Hunter Douglas Case Study |
| 11:15 - 11:45 | Developing and Implementing an Energy Management Plan |
| 11:45 - noon | Resources & Tools for Energy Management Programs |
| noon - 1:15 p.m. | AWARDS LUNCHEON <i>honoring 2009 enHance charter members</i> |
| 1:15 - 1:30 | enHance - MDEQ's Environmental Stewardship Program |
| 1:30 - 2:30 | Environmental Regulatory Outlook for 2009 |

Speakers

Dr. B. K. Hodge, Industrial Assessment Center, Mississippi State University
Chris Emplincourt, Industrial Assessment Center, Mississippi State University
Chris Colburn, Hunter Douglas, Tupelo, Miss.
Henry Sanford, Sanford Associates
Betty Norman, Mississippi Development Authority, Energy Division
Trudy Fisher, Executive Director, Mississippi Department of Environmental Quality
Richard Harrell, Mississippi Department of Environmental Quality

When & Where

◆ **Registration** – 8:30 – 9:00 a.m.;
 Program: 9:00 a.m. to 2:30 p.m.

◆ **Tuesday, March 31, 2009**, Marriott Hotels & Resorts, 200 East Amite Street, Jackson, Miss.

Cost

◆ \$35 per person. Cost includes all training sessions and lunch.

Registration Deadline: March 24
Register early – Seating is limited

REGISTER ONLINE NOW

Reminder notices will be sent a few days prior to the seminar. If you do not receive a reminder notice, or if you would like more information about this or other MMA seminars, contact Barbara at 601-948-1222 or barbara@mma-web.org.



Mississippi Manufacturers Association

Seminar Registration Form



Seminar Name _____

Seminar Date _____ Seminar location _____

Name of Attendee(s) and job title(s) _____

Company Name _____

Company Address _____

City _____ State _____ Zip _____

Attendee Phone Number _____

Attendee Fax Number _____

Attendee E-mail Address _____

If different than above:

Name of Person Submitting Registration _____

Job Title _____

Address _____

Phone Number _____ Fax Number _____ E-mail _____

If different than above:

Billing Contact _____

Address _____

Phone Number _____ Fax Number _____ E-mail _____

Job Title _____

Return form and payment to: Mississippi Manufacturers Association, P.O. Box 22607, Jackson, MS 39225-2607; fax (601) 948-6197. You also may register online at www.mma-web.org.

American Express _____ Visa _____ MasterCard _____
Card number _____ Expiration date ____/____

No refunds without 48 hours cancellation notice! No refunds for no-show.

REMINDER NOTICES WILL BE SENT A FEW DAYS PRIOR TO SEMINAR DATE. If you do not receive a reminder notice, please contact Barbara at 601.948.1222 or barbara@mma-web.org.

Gulf Region Water and Wastewater Plan Groundbreakings

On February 17, groundbreakings were held for infrastructure projects in Hancock County and in Jackson County. The projects in Hancock County are a water well and an elevated storage tank in Kiln that will total \$2.1 million when completed. The projects in Jackson County include improvements to the Gautier Regional Wastewater Treatment Plant, improvements to the Escatawpa Regional Wastewater Treatment Plant, and transmission improvements in the Gulf Park and Ocean Beach Estates area for wastewater treatment, totaling almost \$15 million. These projects are part of the Gulf Region Water and Wastewater Plan, formulated to determine water, wastewater, and storm water infrastructure needs, and are funded through the U.S. Department of Housing and Urban Development’s Community Development Block Grant Program secured by Governor Haley Barbour and Mississippi’s Congressional Delegation.



Trudy Fisher and Larry Ladner at the Kiln ceremony



Groundbreaking with Hancock County Utility Authority and Kiln Water and Fire District representatives



Trudy Fisher along with Jackson County Utility Authority and local officials break ground for Gautier and Escatawpa projects



The gold shovels are ready for the Gautier and Escatawpa projects' groundbreaking



Brad Bradford of the Jackson County Utility Authority at the Gulf Park and Ocean Beach Estates event



John McKay, President Jackson County Board of Supervisors

Solid Waste Facilities Reporting Program Deadline

The Mississippi Nonhazardous Solid Waste Management Regulations require the owner of a solid waste management facility to submit an annual report to the MDEQ each year on or before February 28th. The annual report should include information on the solid waste disposal activities conducted during the preceding calendar year. Solid waste management facilities include commercial and noncommercial landfills, commercial and noncommercial rubbish sites, composting facilities and land application sites.



The basis for these reporting requirements is found in the Mississippi Code Annotated Section 17-17-219 (supp. 2007), which also requires the owner of a commercial solid waste disposal facility to file a statement with the State Tax Commission, before July 15 each year, showing the total amount of waste managed at the facility during the preceding calendar year. At the same time the owner is required to pay to the State Tax Commission one dollar (\$1.00) per ton of waste managed at the facility.

For additional information concerning the solid waste facilities annual reporting requirements, please contact Mr. Pradip Bhowal, Environmental Administrator, MDEQ Solid Waste Policy, Planning & Grants Branch, at (601) 961-5082, Pradip_Bhowal@deq.state.ms.us. More information is available at:

http://www.deq.state.ms.us/MDEQ.nsf/page/SW_SolidWasteFacilitiesReportingProgram?OpenDocument

THE MIOCENE OF MISSISSIPPI, A FAMILY AFFAIR

By David T. Dockery III, Office of Geology

Ken Davis and James Starnes of the Surface Geology Division have been mapping the Miocene of southern Mississippi for a number of years at a scale of 1:24,000, one 7.5-minute quadrangle at a time. The lowest and oldest formation of the Miocene sequence in Mississippi is the Catahoula Formation. Sandstone and quartzite ledges in the Catahoula Formation are responsible for waterfalls and white-water streams in south-central Mississippi. In the first picture below, Ken Davis is standing above a waterfall on Owens Creek in Claiborne County at low flow. Ken's son Leland and daughter-in-law Andria are professional kayak paddlers. The second picture below was taken by Leland of his wife Andria paddling over the Owens Creek waterfall at high flow after the snowstorm of December 11, a storm that left Claiborne County wet and neighboring Copiah County covered in snow. Andria ran the waterfall not just once but three times that day. Other white-water adventures can be seen on Leland's website: rivergypsies.com.



Figure 000. Ken Davis standing on the top ledge of a waterfall over sandstone ledges in the Catahoula Formation on Owens Creek in the NW/4, Section 20, T. 13 N., R. 5 E., Claiborne County. Picture (color negative 526-24) taken on September 14, 2004.



Andria Davis paddling over a waterfall on Owens Creek in Claiborne County during high flow associated with the rain and snow storm of December 11, 2008. The picture (digital) was taken by Leland Davis.

General Permit Coverage? – Just the Beginning

By Chris Sanders, Environmental Compliance and Enforcement Division

The Mississippi Department of Environmental Quality (MDEQ) has issued a number of general permits for various regulated activities within the state. A general permit authorizes a category of activities within a geographical area, usually the entire state. A general permit is not specifically tailored to an individual facility or project but rather regulates an entire universe of activities. An individual or company must apply for a “Certificate of Coverage” under the general permit applicable to their operations. The general permits presently active include the following:

Asphalt, Ready Mix Concrete, Swine CAFO, Poultry CAFO, Dairy CAFO, Mining Stormwater, Baseline Industrial Stormwater, Small Construction Stormwater, Large Construction Stormwater, MS4 Phase II Stormwater, Land Disposal Stormwater, Hydrostatic Testing, Wet Deck Log Spray, Drinking Water Treatment Plant, Class I Rubbish, Class II Rubbish, Municipal Solid Waste Transfer Station, Yard Waste and Rubbish Composting Facilities, and Underground Storage Tanks.

Environmental regulations are ever-changing, but increased media attention to environmental issues has led to increased public awareness of regulatory requirements. A major benefit of this added awareness is that MDEQ finds fewer operations lacking required permit coverages. Unfortunately, the story does not end there, and many operations covered by general permits are needlessly out of compliance with the permit requirements.

Knowing that a permit is required for certain activities, and taking the initiative to apply for and obtain the appropriate permit, is only the beginning. Far too often during MDEQ’s compliance and enforcement activities, staff has found that permittees have little knowledge of the general permit conditions and have encountered situations where the permittee admits that they have never read the general permit applicable to their operation.

Most of these general permits require the permittee to conduct inspections, monitor their discharges and activities, submit reports and maintain records, initiate closure activities, and provide termination notifications, among other activities. When MDEQ personnel inspect facilities, they look for compliance with all of these permit conditions. Furthermore, many reports required to be submitted to MDEQ are tracked electronically, and MDEQ compliance staff are notified when a permittee has failed to submit required reports.

The Environmental Protection Agency (EPA) has implemented a number of national compliance and enforcement initiatives regarding various activities regulated by Mississippi’s general permits. Specifically, EPA has significant interest in stormwater compliance and CAFO operations. Likewise, the Mississippi Commission on Environmental Quality, along with MDEQ’s Executive Director, has directed MDEQ staff to focus efforts on stormwater compliance. These efforts, especially in construction stormwater activities, have resulted in numerous enforcement actions and substantial penalties.

Obtaining a permit (i.e. Certificate of Coverage) does not mean you are free to proceed without restrictions. Please be sure to become familiar with the conditions of the general permit applicable to your operations. Likewise, you should ensure that your employees, consultants, contractors and others that may be working on your project are also familiar with the permit requirements. As always, MDEQ will be glad to answer questions that you may have regarding your permits. MDEQ prefers to answer questions and assist with compliance rather than taking enforcement actions. If you have questions, please contact the MDEQ Environmental Permits Division or the Environmental Compliance and Enforcement Division at 601.961.5171.

A Day in the Life of Ozone Forecasting

By Rodney Cuevas (AIR)

Ozone is a gas whose molecules are composed of three atoms of oxygen. Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found. It occurs naturally in the stratosphere approximately 6 to 30 miles above the Earth's surface where it forms a protective layer that shields us from the sun's harmful ultraviolet rays. In the Earth's lower atmosphere, near ground level, ozone occurs naturally in lower amounts, and additional ozone is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources react chemically in the presence of sunlight. Because this reaction takes time to occur, ozone is usually formed downwind of emission sources.

The ozone forecasting season for Mississippi is April 1 to October 31. During this time of year, ozone has the potential under the right meteorological conditions to increase in concentration. A few meteorological factors that enable ozone to form are the following:

Sunlight and heat: Warm, sunny days produce higher ozone concentrations than cool or cloudy days.

Wind: On windy days the wind disperses the ozone, causing concentration levels to drop. Ozone pollution can increase during summer heat waves when the air is stagnant and does not mix very well, preventing air pollution from dispersing.

Time of Day: Ozone levels build during the day. On a clear day, ozone levels continue to rise all day long and then decrease rapidly after sunset. Since heat and sunlight increase during the day, the ingredient gases also increase, enabling ozone to develop. Peak ozone formation occurs during the afternoon/evening hours between noon and 5:00 p.m. When the sun goes down, there is no energy for ozone formation and fewer ingredient gases -- so ozone levels drop.

Low Humidity/Dry Air-mass: The lower the humidity the more likely ozone will form over the area.

Transport: Ozone can also be transported easily by wind from one location to another. One example is pollutants from New Orleans being transported to the Mississippi Gulf Coast. Transport makes poor air quality a concern to not only urban areas but also surrounding suburban and rural areas.

Many tools and techniques are used that aid in ozone forecasting. Some techniques are simple, yet not very accurate; other techniques are more complicated yet more accurate. For best results, forecasters combine the results of these tools to create a consensus forecast, which tends to be more accurate than the results from a single tool since one tool's strengths balance another's limitations. A few meteorological tools that are used are the following:

CART (Classification and Regression Tree): CART is a statistical tool that predicts the maximum Air Quality Index (AQI) categories for the current and next day periods. To use the CART decision tree, forecasters answer Yes/No questions at each decision point. Eventually, a forecast is reached that shows the probability of observing the five AQI categories (**Good, Moderate, Unhealthy for Sensitive Groups, Unhealthy, and Very Unhealthy**).

Climatology: The study of average and extreme weather conditions over an extended period of time, also applies to ozone forecasting. Although not very useful as a forecasting tool alone, forecasters use this information to guide and bound their forecasts.

Criteria: The criteria method uses threshold values (criteria) of meteorological or air quality variables to forecast ozone concentrations. This technique is based on the fact that specific values of certain meteorological and air quality variables are associated with high ozone concentrations.

Forecasting Models: Weather/Numerical models are the forecaster's best tools for looking into the future. Once forecasters get a solid idea on precipitation chances, clouds, high/low temperatures, wind-speed, etc, they will have a better handle on whether or not the atmosphere will be conducive to ground level ozone formation.

HYSPLIT (Hybrid Single-Particle Lagrangian Integrated Trajectory): HYSPLIT back-trajectories help the forecaster by showing the path that an air parcel took to reach the region. HYSPLIT aids in transport forecasting.

Regression Equations: Regression is a statistical relationship between the mean value of a random variable and the corresponding values of one or more independent variables. For ozone forecasting, the relationship is between forecasted ozone concentrations and other variables such as the previous day's 8-hour ozone concentration average, temperature, min humidity, wind speed, etc.

MDEQ issues a daily ozone forecast and ozone air quality index for the Mississippi Gulf Coast. This information is made available to the general public as well as being provided to weather media for inclusion in daily weather reports. For the latest ozone forecast and ozone AQI for the Gulf Coast, Desoto County and the Jackson Metro area go to <http://opc.deq.state.ms.us/aqi/default.htm>. The forecast and ozone AQI will be posted by 4:00 p.m. daily.

| Air Quality Index (AQI) Values | Levels of Health Concern | Colors |
|---------------------------------------|---------------------------------------|--|
| <i>When the AQI is in this range:</i> | <i>...air quality conditions are:</i> | <i>...as symbolized by this color:</i> |
| 0 to 50 | Good | Green |
| 51 to 100 | Moderate | Yellow |
| 101 to 150 | Unhealthy for Sensitive Groups | Orange |
| 151 to 200 | Unhealthy | Red |
| 201 to 300 | Very Unhealthy | Purple |

Going Green Mississippi Champions

Do you know of a class, school, business or civic organization that is environmentally friendly? Nominate them as a Going Green Mississippi Champion!



MDEQ, MDOT, and WLBT-TV in Jackson are teaming up to recognize organizations in Central Mississippi for outstanding volunteer environmental projects. The call for nominations will begin April 27 and end May 24. Each of the winners will be recognized on air and also on the WLBT website.



New EPA Administrator Lisa Jackson

As EPA's Administrator, Lisa P. Jackson leads a staff of approximately 18,000 professionals dedicated to protecting the public health and environment of all Americans. She was nominated to lead the Agency by President Barack Obama on December 15, 2008, and confirmed by the Senate on January 23, 2009. She is the first African American to serve in that position.

Administrator Jackson lists among her priorities reducing greenhouse gas emissions, improving air quality, managing chemical risks, cleaning up hazardous waste sites, and protecting America's water.

Before becoming EPA's Administrator, Jackson served as Chief of Staff to New Jersey Governor Jon S. Corzine. Prior to that, she was appointed by Governor Jon S. Corzine to be Commissioner of the state's Department of Environmental Protection (DEP) in 2006. While Commissioner, Jackson was known for her advocacy for reducing greenhouse gases, aggressively addressing pollution, and having an open and honest dialogue with stakeholders in the public policy process. She was also noted for ensuring that underserved communities received fair environmental protection under the law.



Jackson joined DEP in 2002, serving as Assistant Commissioner for Compliance and Enforcement, then Assistant Commissioner for Land Use Management, before becoming Commissioner. Prior to joining DEP, she worked for 16 years as an employee of the U.S. EPA, initially at its headquarters in Washington and later at its regional office in New York City. During that time, she was involved in directing hazardous waste cleanup operations and helping to direct the region's enforcement division.

Jackson is a summa cum laude graduate of Tulane University's School of Chemical Engineering and earned a master's degree in chemical engineering from Princeton University. She was born in Pennsylvania and grew up a proud resident of New Orleans, Louisiana. (*biography sourced from epa.gov*)

Deer Creek Watershed Association

MDEQ has provided funding for the Northwest Mississippi Resource Conservation and Development program in partnership with the Deer Creek Watershed Association and others to conduct clean-up events in communities along Deer Creek and implement an educational and outreach program. The Deer Creek Watershed Association is a locally-led organization with the purpose of addressing issues on Deer Creek. The effort is led by a steering committee consisting of local landowners, residents, stakeholders, municipal and county officials. Thirteen clean-up events were held in the seven communities of Anguilla, Arcola, Cary, Hollandale, Leland, Rolling Fork, and Metcalfe. Over 1,100 volunteers contributed 3,353 hours of volunteer service. To increase awareness among young people, a Deer Creek Essay Contest was conducted in nine schools along Deer Creek. The theme of the contest was “Why is Deer Creek Important.” Awards were presented for 1st, 2nd and 3rd places.



Result of clean-up activities—Deer Creek Watershed



(Front row, from left) Fred Childs, Chairman Northwest MS RC & D; Rick Hagar, NRCS; Mayor Willie Burnside, Hollandale; Ronnie Yarborough, Chairman DCWA; Mayor Shirley Allen, Chairman-elect DCWA; Mayor Robert Seaton, Cary.

(2nd row, from left) Ronnie Williams, Alderman, Hollandale; Wesley Kerr, NRCS; Emmett Smith, Jr, Greenville; Helen Johnson, City Clerk, Hollandale; Raymond Scott, Alderman, Metcalfe.

At the Mississippi Association of Conservation Districts Annual Meeting in Jackson on January 21, the Deer Creek Watershed Association received the USDA-NRCS State and National Earth Team Volunteer Group of the Year Award. The association won this national award for its clean-up efforts and its educational outreach.

Deer Creek is a 159 mile creek that flows from Lake Bolivar near Scott through five counties and into the Whittington Auxiliary Channel near Vicksburg. Once a navigable waterway fed by Mississippi River overflow, now portions of the creek have been reduced to a series of stagnant ponds filled only when the area has heavy rainfall. The banks of Deer Creek contain some of the highest elevation land in the Delta and some of the most picturesque for residents and visitors alike.

(Thanks to Ronn Killebrew, Surface Water Division, for the information)

100 YEAR OLD COAL MINES IN MISSISSIPPI?

By Stan Thieling, Office of Geology

Many Mississippians are surprised to hear that there is a coal (lignite) mine in Mississippi. It just isn't the kind of thing we think of as being here; maybe Alabama, but not here. There really is a 5,900 acre surface coal mine in Choctaw County, five miles north of Ackerman, and it has been in operation for nearly ten years.

An even greater surprise would be finding out that 100 years ago there were a number of lignite mines around the state. Granted, these mines were very small and short lived, but some did exist.



6' x 8' x 11' deep dry, vertical air shaft at Russell, Lauderdale County

Because of the poor environmental history of the mining industry in general, and the coal mining industry in particular, beginning in 1977, as part of the Surface Mining Control and Reclamation Act (SMCRA), Congress authorized the Office of Surface Mining Reclamation and Enforcement (OSM) to assess a per-ton production fee on all present-day coal mines. The funds generated by this fee are to be used to reclaim environmental problems at historic coal mines. Historic coal mines are those which existed before 1977 and did not have a reclamation bond under SMCRA.

Mississippi was the third state to gain primacy from OSM under SMCRA, which happened in 1980. Primacy is the authority to regulate coal mining within the state. This authority includes the ability to establish an Abandoned Mine Land (AML) program. Although Mississippi had primacy in 1980, the first coal mining permit was not applied for until 1997 and issued until 1998. The AML funds generated by production at this mine were reserved for Mississippi by OSM. Mississippi's AML plan was approved by OSM in September 2007; DEQ received the first AML grant beginning in February 2008. This initial AML grant was to do research and assemble an inventory of abandoned coal mine sites which would be eligible for reclamation by DEQ under this grant.

Publications by the Office of Geology's in-name predecessors, the Bureau of Geology and the Geological Survey, have published references to lignite in Mississippi as far back as the 1850s. Reports of lignite mining go back to the early 1900s. There apparently was a time in the very late 1800s and early 1900s when a boom period existed for attempts at coal mining within Mississippi. Records from the Department of Archives and History tell a story of a number of somewhat shady "investment" schemes. Unsuspecting investors may have been scammed when promoted and promised mining never materialized. However, a number of legitimate companies did exist and attempted to establish successful, commercial mines. Some of the companies involved include the Mississippi Oil and Gas Co-operative Joint Stock Company, the Meridian Fertilizer Company, and the Gulf, Mobile, & Northern Railroad.



Partially flooded underground mine near Louisville, Winston County

Vertical air shafts into former underground coal mines have been found east of Meridian at Russell and near Ackerman. Much searching has not found the entrance to either of these mines, indicating that they have probably collapsed. Collapse would not be too surprising considering that the “roof” of each mine would have been made of clay, not rock. An underground mine still exists near Louisville. No air shaft has been found, but the entrance to the mine is still open. A part of the mine “roof” at the entrance has collapsed, creating a dam which has trapped rain and ground water, flooding the floor of the mine. The size of these mines is unknown, but all are believed to be small by modern standards, likely less than 1-2 acres. However, at least one was large enough to have been described as using “room and pillar mining,” a common method still used today. One small surface coal mine is

well known locally at Reform. Covering about a half acre, it is still used today as a fishing pond.

It is DEQ’s intent, given landowner permission, to reclaim these sites to eliminate hazardous situations. The air shafts are 11 and 23 feet deep with vertical walls. Anyone accidentally falling into one of them would be trapped if they were alone. The remainder of the roof of the mine near Louisville could collapse at any time and crush or trap anyone in it. Fishing in the shallow surface mine near Reform is not planned to be disturbed.



10’ x 11’ x 23’ deep flooded vertical air shaft near Ackerman, Choctaw County

MISSISSIPPI AND THE GREAT “CARBON BURP” 55.5 MILLION YEARS AGO

By David T. Dockery III, Office of Geology

The 55.5-million-year-old Paleocene-Eocene boundary was a time marked by the sudden release of methane from gas hydrates on the sea floor, informally referred to as the “Carbon Burp,” which changed the composition of globally distributed carbon isotopes. It was followed by a geologically-brief, 170,000-year episode of global warming (of 5-8° C) in both low- and high-latitude regions. Associated with this warming event were biological crises on land and sea, including migrations, extinctions, new species, and the acme zone (or algal bloom) of the marine dinoflagellate *Apectodinium*, a mobile blue-green alga. Today algal blooms of the dinoflagellate species *Alexandrium fundyense* and *Karenia brevis* cause the fish-killing red tides of the North American East Coast and of the Florida coast, respectively. *Apectodinium* was found to be abundant at the Paleocene-Eocene boundary section behind the old Red Hot Truck Stop at Meridian, Mississippi, and was recently found by Professor Appy



Linda van Roij, a Dutch graduate student at Utrecht University, standing on the grounds of the Mississippi Museum of Natural Science among fossiliferous boulders from the Bashi Formation, which were transported to the museum from just above the Paleocene-Eocene boundary in Meridian, Mississippi. The picture (digital) was taken on November 14, 2008.

Sluus of Utrecht University (Netherlands) to be abundant at this boundary in the Mississippi Office of Geology #1 Harrell core from Lauderdale County, based on his examination of core samples previously collected for pollen study by Guy Harrington of the University of Birmingham, England. To pinpoint the Paleocene-Eocene boundary in the Harrell core (one of many such cores archived in the Office of Geology’s core and sample library at its North West Street building), Dr. Sluus sent his graduate student Linda van Roij, on short notice, to Mississippi to sample the core at 15 cm intervals. Linda arrived in Jackson on November 12 and departed on November 21, 2008. While here, Linda traveled also to the Geological Survey of Alabama (on the campus of the University of Alabama), where she sampled the Paleocene-Eocene boundary interval in the St. Stephens core from the St. Stephens quarry in Washington County, Alabama. The climate history preserved in Mississippi’s sedimentary rocks is important in the study of current global warming trends.

Video Shows Green Practices to Manage Stormwater Runoff

The U.S. Environmental Protection Agency and the U.S. Botanic Garden have produced an on-line video, “*Reduce Runoff: Slow It Down, Spread It Out, Soak It In,*” that highlights green techniques such as rain gardens, green roofs and rain barrels to help manage stormwater runoff.

The film showcases green techniques that are being used in urban areas to reduce the effects of storm-



Straw Bale House at U.S. Botanic Garden

water runoff on the quality of downstream receiving waters. The goal is to mimic the natural way water moves through an area before development by using design techniques that infiltrate, evaporate, and reuse runoff close to its source.

The techniques are innovative stormwater management practices that manage urban stormwater runoff at its source and are very effective at reducing the volume of stormwater runoff and capturing harmful pollutants. Using vegetated areas that capture runoff also improves air quality, mitigates the effects of urban heat islands and reduces a community’s overall carbon footprint.

The video highlights green techniques on display in 2008 at the U.S. Botanic Garden’s “One Planet – Ours!” Exhibit and at the U.S. EPA in Washington, D.C., including recently completed cisterns.

To watch the video: <http://www.epa.gov/nps/lid>. (EPA Press Release, 1/25/09)



Need beverage container recycling bins for your local park, school, office or special event?

The Coca-Cola and National Recycling Coalition (NRC) Bin Grant Program supports local community recycling programs by providing selected grant recipients with containers for the collection of beverage container recyclables in public settings. Selected grant recipients will receive actual recycling bins instead of funding.

The grant program is open to government, civic, school, non-profit groups, and for-profit companies. The Harrison County Beautification Commission has won one of the 85 recycling bin grants and was the only Mississippi community to do so. Petal Relay for Life won a grant in the spring of 2008. MDEQ encourages more organizations to look into the program and apply.



Eligible activities include but are not limited to establishing or enhancing a recycling collection program. This includes the use of specialized containers at community events or functions, public facilities, and programs or events conducted by applicants. The bins must be intended for use in one of four types of settings:

- Education (K-12 and universities)
- Sports (parks and sport venues)
- Culture (music and arts)
- Commercial (office and facilities)

Grants are available twice a year in the spring and fall. The next grant period will be in the spring of 2009. Applications will be accepted beginning February 16, 2009. For more information about the grant program, visit the program website at <http://www.bingrant.org> or call (843) 278-7686.

Ag Pilots Recognized for Environmental Stewardship

Five pilots were recently recognized for exemplary environmental stewardship. Selected pilots were ranked highest among their peers based on criteria established through the A.C.E. (*Applicators Conserving the Environment*) Pilot Program. Those pilots selected for recognition includes Mooney Easely flying from Planter's Air Service in Alligator, Charles Travis flying from Cottonwing Air in Indianola, Billy Ray Kent flying from Snow Brake Air Service in Webb, Paul Riddell flying from A & L Farm Service in Helena, Arkansas, and Gordon Boozer flying from Ag Air in Scott.

The A.C.E. Pilot Program was developed to recognize top environmental stewards in the ag aviation industry and to incentivize others pilots to become better stewards. Those organizations involved in developing, administering, and validating the program include CropLife America, Delta Council, Delta F.A.R.M., Mississippi Agricultural Aviation Association, Mississippi Ag Industry Council, Mississippi Department of Agriculture and Commerce, Mississippi Farm Bureau Federation, Mississippi Department of Environmental Quality, Monsanto, Southern Crop Protection Association, Syngenta, USDA Agricultural Research Service and the U.S. Environmental Protection Agency.

All licensed aerial applicators in Mississippi who were members of the Mississippi Agricultural Aviation Association in 2008 and had no proven drift violations within the past 24 months were eligible to participate in the A.C.E. Pilot Program. Each participant completed a questionnaire that documented his experience, track record, and voluntary environmental stewardship efforts.

Mark Kimmel, President of the Mississippi Agricultural Aviation Association presented each A.C.E. Pilot with a plaque and a cash award for \$1,500.00 at the recent Mississippi Agricultural Aviation Association annual meeting in Philadelphia. Each pilot will also receive a sign for their place of business, recognizing their achievement.

(Delta F.A.R.M. press release, January 27, 2009)



2008 ACE Winners L-R, Gordon Boozer, Charles Travis, Billy Ray Kent

Sustainable Choices – Today, Tomorrow, & Together

Mississippi Museum of Natural Science

January 24 – May 10, 2009

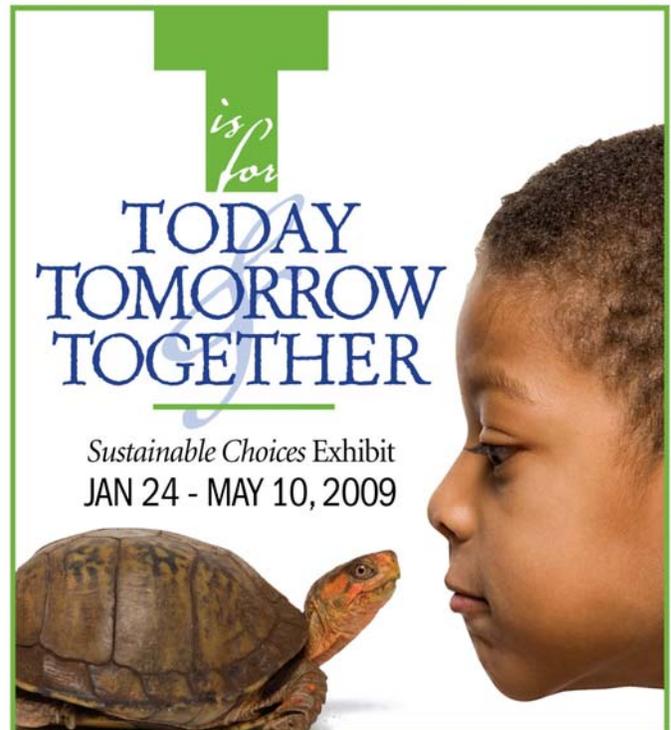
Explore the way everyday actions affect our earthly neighbors.

MDEQ is a sponsor of this upcoming exhibit at the Mississippi Museum of Natural Science in Jackson. This interactive exhibit, organized by NRG! Exhibits, explores the concept of sustainability, and the choices that each of us make every day. Sustainability, or meeting the needs of the present without compromising the ability of future generations to meet their own needs, is an increasingly important topic as the world's population and consumption expands. *Sustainable Choices* will engage visitors with thought-provoking content, interactive exhibits and live animals.

“Museum Educators will use live animals in the exhibit, including box turtles and alligators, to help visitors link their daily choices with how they affect our habitat and wildlife,” explains Libby Hartfield, Museum Director.

“The Mississippi Department of Environmental Quality is pleased to be part of this unique exhibit. One of our agency's goals is to provide information to Mississippians about the importance of water conservation, the impact they have every day on water quality, and opportunities for people of all ages to help. We believe this exhibit will help us inform visitors about these ideas, and we encourage everyone to take advantage of this engaging exhibit,” said Trudy Fisher, MDEQ Executive Director.

Sustainable Choices is made possible by the support of Entergy, Mississippi Department of Environmental Quality, Mississippi Wildlife Federation, Mississippi Department of Wildlife, Fisheries and Parks, The Natural Resource Initiative (NRI), MSCAN, Emme Wells and other generous supporters.



Permitting in Difficult Economic Times

By Harry Wilson, Environmental Permits Division

The MDEQ permitting staff realizes that with today's difficult economy and market conditions, the communities of industrial and commercial businesses regulated and permitted by MDEQ are faced with unique challenges in order to stay viable. Due to these challenges, staff anticipates some facilities may make changes in operations, staffing, shifts, product or services in order to adapt and keep the facility flexible and profitable. MDEQ encourages the review of permits and permit requirements in anticipation of any planned changes. Since there may be modifications to existing permit requirements or the need for new environmental permits, the EPD staff is offering to schedule pre-application meetings or simply conference calls in order to discuss any planned changes and to ensure that any necessary permit actions are accurate and timely. To find an MDEQ contact, follow this link, http://opc.deq.state.ms.us/search_ai.aspx#grid to access the MDEQ Agency Interest search page. Type in a facility name and click "search." Once the facility is found, click on the blue "AI ID" number and that will provide selected information about the facility. The Office of Pollution Control Permit Manager's name and phone number are located near the bottom of the page to aid in scheduling the appropriate permitting discussions. Should you have any difficulties, contact Harry Wilson, Permitting Chief.

New Filing Folder Request

When MDEQ moved into its new building last year, much of the file system had to be reworked to maximize space and efficiency. Several changes were made in the way staff handles and stores the facility files associated with Office of Pollution Control (OPC) permits, approvals, certifications and other documentation. Over the last few years, the staff in the OPC file room has improved the filing system, rebuilt old files, removed duplicate documents and organized the system in a more efficient manner.

One major change to maximize space in the file system was to add additional shelves. While this addition allowed for more linear file space, it necessitated that documents could no longer be stored in three ring binders. Many permit applicants submit applications and other submittals in three ring binders. The use of three ring binders for OPC submittals is not required but does necessitate the file staff to remove the documents and place them in flat, report cover type binders. MDEQ requests that three ring binders no longer be used which will be more space efficient and will reduce costs to the regulated community.

MDEQ staff is using different binder colors to denote the different media. If you are inclined to use the same color coding process, it would be beneficial for the filing process: dark blue (pretreatment), dark green (air), light blue (solid waste), brown, (NPDES), light green (hazardous waste), and red (confidential).

If you have questions, please contact Linda Garrett, File Room Branch Director.



Two types of folders that will help save space and costs

Adopt-A-Stream

The Mississippi Wildlife Federation, along with the Mississippi Department of Environmental Quality, will hold a two-day Adopt-A-Stream workshop at Paul B. Johnson State Park near Hattiesburg on June 9 -10.

Adopt-A-Stream is a program that promotes environmental stewardship through training workshops, outdoor field activities, and by introducing participants to watershed action projects.



The two-day program provides an in-depth study of watersheds as well as hands-on training in chemical and biological parameters important to a healthy stream. A watershed characterization tool, using the latest in Geographic Information Technology, will examine the conditions of different watersheds. In addition, the workshop will:

- Increase awareness of nonpoint source pollution
- Introduce surveying and mapping of your watershed
- Introduce Scenic Streams in Mississippi
- Introduce possible actions that can be taken to help your watershed, such as:
 - Storm Drain Marking
 - Stream Cleanups
 - Participation in World Water Monitoring Day (WWMD)
 - Advocacy and More

Who Should Participate?

Educators, land managers, advocacy groups, Scout troop leaders, Envirothon Team Advisors, watershed team leaders, environmental educators, concerned citizens and others. For teachers, two CEU credits are available.

Registration Information

Registration is available on the Mississippi Wildlife Federation/Adopt-A-Stream website: www.mswildlife.org or by contacting Debra Veeder, Adopt-A-Stream Coordinator at (601)206-5703 or dveeder@mswf.org for a registration form. The registration deadline is May 15.

FYI ON FOI

The Commission on Environmental Quality, the Mississippi Environmental Quality Permit Board, and the Mississippi Department of Environmental Quality practice an open records policy. In 1983, the Mississippi Legislature passed the Mississippi Public Records Act that defined “Public Records” and mandated public access to public records. Always cognizant of citizens’ concern about government responsibility, MDEQ strives to remain true to its written value to respond promptly, courteously, and as completely as possible to any request including those under the open records requirement. In addition, MDEQ’s treatment of file information is governed by two statutes that apply only to the agency. The first applies to information concerning the regulation of nonhazardous and hazardous waste, and the second applies more generally to all information obtained by the Commission, the Permit Board and MDEQ. These statutes require that all information concerning “environmental protection” collected by MDEQ, the Commission, and the Permit Board be treated as public information that shall be made available upon proper request. MDEQ’s Freedom of Information office handles these requests and is open to the public for document review and reproduction of any documents that are not exempt from disclosure.



When an individual submits a written request, the FOI Administrator determines the exact location of records requested. All records are usually reviewed at the MDEQ office location where the records are housed. However, if an individual seeks to review records that are housed at multiple locations, the FOI administrator will work with staff and the individual requesting the records to set up an appointment at the appropriate MDEQ building. The fees associated with reproduction of records, the costs of reproduction, and certification are payable by the requesting individual, the firm, or their representative. The schedule of charges and fees is filed with the Secretary of State’s Office in accordance with the Public Records Act.

Requests must be submitted in writing and addressed to the Freedom of Information office. The Mississippi Legislature Public Records Act allows up to 14 working days from the date of the request, and routine requests usually take two to three days. Requests can be made by mail to MDEQ Freedom of Information, 515 East Amite Street, Jackson, 39201, or Post Office Box 2261, Jackson, MS 39225, by fax to 601-354-6356, or by email to freedomofinformationcontact@deq.state.ms.us. Questions can be directed to Edna Banks, Freedom of Information Administrator, at 601-961-5118.



MDEQ ENVIRONMENTAL ACTIONS

For a listing of draft permits currently at public notice, click [here](#) .

For a listing of permits and certificates issued in the last 90 days, click [here](#) .

For a listing of the general permit coverages issued in the last 90 days, click [here](#) .

For a list of the permit applications received by the Environmental Permits Division, click [here](#) .

For a list of the Notices of Intent for coverage under a Statewide General permit received by the Environmental Permits Division, click [here](#) .

For a list of the 401 Water Quality Certifications currently at public notice, click [here](#) .

For a list of the compliance inspections recently conducted, click [here](#) .

**Special thanks to Michelle Vinson for compiling these.*

CALENDAR OF EVENTS

FEBRUARY

February 10—Permit Board Meeting

February 16—Presidents' Day holiday

February 26—Commission Meeting

MARCH

March 10—Permit Board Meeting

March 26—Commission Meeting

The mission of the Mississippi Department of Environmental Quality is to safeguard the health, safety, and welfare of present and future generations of Mississippians by conserving and improving our environment and fostering wise economic growth through focused research and responsible regulation.

Mississippi Department of Environmental Quality

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