



DISCOVER DEQ

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY NEWSLETTER

Monday, May 2, 2011

Issue Number: 10

AIR QUALITY UPDATE

May has been proclaimed to be Clean Air Month and May 2 to 6 is Air Quality Awareness Week. DEQ is asking all residents of Louisiana to consider making individual changes that can improve the quality of the air and environment

EPA sets the standards for the criteria pollutants – lead, carbon monoxide, nitrogen oxide (NOx), sulfur dioxide (SO₂) ozone and particulate matter -- and the federal agency is required to review and update their standards on a five-year schedule. This review could result in the tightening of the standards for these pollutants, which means air quality issues will continue to be challenging.

Historically, Louisiana has been in compliance with all federal air quality standards in all areas of the state – with the exception of the pollutant ozone in the Baton Rouge area. The last area of the state to meet 1997 ozone standard was the 5-parish area surrounding Baton Rouge. Although there is data to show that the state is in compliance with all federal standards, the new, more stringent standards may put all of the major metropolitan areas out of compliance for ozone.

- Louisiana currently complies with all federal standards for particulate matter but this standard is under review. Particulate matter is released during a number of operations that include open burning, from combustion sources, utility plants, construction activities, the pulp and paper industry, and diesel engines.

- For lead, additional monitoring has been installed in the state. Primary sources of lead emissions are smelters, steel mills and from some propeller driven aircraft.

- For carbon monoxide, look for additional monitoring to be added even though EPA did not lower the standard. Primary sources of carbon monoxide emissions are refineries, carbon black manufacturing operations, vehicle emissions and open burning.

- For Nitrogen Oxide, EPA is focusing on emissions from motor vehicles. DEQ will be installing monitoring adjacent to several high traffic areas to monitor the vehicular emissions. States do not have authority to regulate emissions from motor vehicles or from other similar sources such as lawn and garden equipment, recreational and construction equipment and trains.

- West Baton Rouge and St Bernard Parishes will be directly affected by recent changes to the SO₂ standard. Monitoring in these parishes shows them to be in violation of the new stricter standard SO₂ emissions result primarily from some chemical manufacture, refineries and utilities. Other parishes may also be affected if their emissions contribute to the violations.

- The ozone standard is still being reconsidered and could be lowered. EPA has proposed to strengthen this standard, which will impose more regulations on business as well as the general public. Ozone is formed when volatile organic compounds react with NOx in the presence of sunlight. The final EPA decision on ozone is expected in July 2011.

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What can the individual do to improve air quality?

- Follow ozone action day tips year round. It saves energy and money and reduces emissions. Subscribe to EnviroFlash for current air quality notification by email or text.
- When you replace fuel-run motors, purchase fuel efficient vehicles, lawn and recreational equipment.
 - This results in fewer emissions and saves you money on fuel.
 - Purchase lawn and recreational equipment with 4-cycle rather than 2-cycle engines.
 - Reduce energy consumption in the home. This reduces the burden on the electrical grid, reduces power plant emissions and lowers your utility bill.
 - Practice conservation techniques at work
 - Bring your lunch to work to avoid driving in mid-day when ozone formation is really cranking up!
 - Talk with your employer about flexible work hours and telecommuting to reduce emission
- Curtail use of drive-thru windows on ozone action days and reduce idling in your car and with your lawn equipment

Ozone Action Day Measures

- Maintain your vehicle properly
- Trip chain, combine errands and limit daytime driving
- Ride public transportation or carpool to work
- Take your lunch to work
- Walk or ride a bicycle for short trips.
- Refuel when its cool - after 6 p.m. Don't top off your tank.
- Avoid prolonged idling and jackrabbit starts - "Drive Emission-wise."
- Wait until the evening (6 p.m.) to mow your lawn or use gas powered lawn equipment
- Barbecue with an electric starter or use a chimney, not fluid starter.
- Conserve energy in your home.

DEQ RECOGNIZES THE NEW ORLEANS PUBLIC BELT RAILROAD FOR EMISSIONS REDUCTION MEASURES

Through assistance from DEQ and the U.S. Environmental Protection Agency, \$1.73 million in federal stimulus funding was made available through the American Recovery and Reinvestment Act of 2009. The funding was divided up for distribution to several businesses and entities who undertook projects designed to reduce diesel emissions and promote cleaner, healthier air in Louisiana.

The New Orleans Public Belt Railroad was one such business that was awarded a grant under ARRA. The NOPB's desire to upgrade their locomotives into a more eco-friendly standard stood as an example of a noteworthy "green" project that would make a positive

impact upon the environment. Shortly after their total funding request of \$214,172.92 was approved, NOPB went to work to install idle reduction switches and eco-tip fuel injectors on seven switch locomotives.

"The New Orleans Public Belt has put the ARRA funding to great use as they quickly implemented a plan to perform environmentally friendly improvements within their locomotive fleet," said Michael Vince, DEQ Senior Scientist. "These measures will radically reduce the emission of nitrogen oxide, carbon monoxide, hydrocarbons and particulate matter into the air, while also reducing diesel fuel expenditures in and out of the rail yard."



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DEQ Senior Staff Scientist Michael Vince gives a presentation to the NOPB staff and EPA representatives



NOPB Shop Foreman Mike Ranson (middle) discusses locomotive operations with DEQ Senior Staff Scientist Michael Vince (left) and EPA Assistant Administrator Craig Hooks (right)

According to Part 1033 under the EPA rule, any locomotive returning to service must be overhauled and equipped to have an idle reduction device in place. Under that directive, NOPB outfitted seven locomotives in their fleet with the new idle reduction controls. Over the course of the year following the upgrades, NOPB has conserved approximately 106,743 gallons in annual fuel savings, with approximately \$248,711 saved in fuel costs, plus \$12,722 saved in performing manageable shutdown operations. These measures, including enhanced crew training, streamlining operations and the installation of new equipment have transitioned New Orleans Public Belt Railroad into a more eco-friendly conscious company.

Powered by electricity and running on a diesel engine, the new engines are only running for 35 minutes out of a four-hour operating cycle due to the new idle reduction and automatic shut off controls. These measures amount to a savings of 4 to 5½ gallons in fuel savings, which equates to approximately \$19,000 to \$27,000 in monetary savings for the NOPB.

Mike Ranson, Shop Foreman with the NOPB, recently led a tour through the locomotive yard with Craig Hooks,

Assistant Administrator with EPA, and Gilberto Cuadra and Michael Vince of DEQ's Air Permits Division.

"The project was successful in accomplishing the goals of reducing emissions and fuel usage savings. It also reduced the required maintenance required on our locomotives which is a cost savings," said Ranson. "In addition, this project helped the New Orleans Public Belt Railroad retain two technicians which otherwise may have been furloughed. The bulk of the funding spent on materials, equipment and labor assistance went to Louisiana vendors."

Idling reduction on the locomotives is estimated at a fuel savings of 67,830 gallons or \$162,792 over the course of 2,100 operating hours. Yearly, nitrogen oxide emissions are expected to be reduced by 696 tons; particulate matter will lower by 20 tons; hydrocarbon output will see a 32 ton reduction; and carbon monoxide will drop by 91 tons. Over the course of 15 years, nitrogen oxide emissions from the rail yard will be reduced by over 10,438 tons.



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DEQ TAKES SAMPLES TWICE A WEEK TO DETECT FOR ANY PRESENCE OF RADIATION IN THE AIR

In light of the events at Japan's Fukushima nuclear power plant facility in late March of 2011, the air quality as it relates specifically to radiation in the United States, has been a popular topic in headlines across the nation. According to the U.S. Environmental Protection Agency and the Louisiana Department of Environmental Quality, Louisiana's air quality is the best it has ever been in all aspects, and radiation levels are well below any level of concern. To ensure it stays that way, scientists from the Louisiana Department of Environmental Quality test the air for radiation twice a week at the EPA's radiation monitoring stations in Shreveport and Baton Rouge.

On April 1, 2011, DEQ Environmental Scientist Greg Gothard and DEQ Chemical & Radiological Emergency Response Manager Peter Ricca accompanied a WAFB channel 9 news team to demonstrate the air monitoring process regarding radiation detection in the air in southern Louisiana. The radiation monitoring is performed at least twice a week. The process involves removal of the air filter, whereupon it is tested with a survey meter after a 5-hour incubation period. On this particular testing day, the reading showed 0.06 picocuries, which is slightly above the annual average reading. Minute changes in any particular reading can be influenced by any number of environmental phenomena. Rates in the past were around the 0.03 picocurie range, and levels that exceed 1.0 picocuries are the measuring stick by which a potential concern could arise. Since a picocurie is one-trillionth of a percent, or 0.000000000001, the sample taken on April 1 was at a reading of 0.06, or 6 percent of one-trillionth.

The EPA's 124 radiation monitors throughout the country test for all air particles, including any presence of radiation.

In addition to the EPA's air monitoring sites, the DEQ currently maintains 38 ambient air monitoring stations



DEQ Environmental Scientist Greg Gothard (right) and DEQ Chemical & Radiological Emergency Response Manager Peter Ricca (middle) explain radiation monitoring procedures to WAFB news reporter Kiran Chawla (left)

throughout the state. These are not part of the EPA radiation monitoring network, but they receive data on a wide range of emissions such as nitrogen oxide, carbon dioxide and particulate matter.

"While naturally occurring radiation is present in bananas, drinking water and dental X-rays, normal background levels are usually well below the normal standard of 100 millirem that a person receives each year," Ricca said. "Today's reading is indicative of the normal levels we tend to see as we conduct our weekly tests."

EPA has been monitoring the air since the earthquake disaster in Japan and has issued statements saying that there are no anticipated health risks in the United States associated with the incident in Japan radiation.



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DEQ ON THE MOVE



Earth Day in Downtown Baton Rouge



DEQ Secretary Peggy Hatch meets with Mike Strain, LA Agriculture Secretary



DEQ Staff give out information at the Earth Day Celebration at ULL



AI Hindrichs, DEQ, demonstrates Walnut Bayou at the Environmental Educational Symposium



DEQ Secretary Peggy Hatch addresses the plenary session at the ULM Solid Waste Conference in Lafayette



Ned Richard and Linda Brown man the DEQ booth at the Solid Waste Conference



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DEQ INVESTIGATION INTO OIL SPILL RESULTS IN INDICTMENT OF TWO SHREVEPORT WASTEWATER OPERATORS

In late February 2011, a federal grand jury returned an indictment charging a wastewater treatment general manager and a shift supervisor with discharging untreated wastewater to the publicly owned treatment works in Shreveport.

John Tuma, 53, of Centerville, TX, and his son, Cody Tuma, 27, of Shreveport, were both charged in a five-count indictment with violations of the Clean Water

Act, including conspiracy and obstruction of justice. The violations were related to illegal discharges into the Red River originating from ArkLa Disposal Services, Inc., of Shreveport. The facility's intended purpose is to receive off-site wastewater from industrial processes and from oilfield exploration and production facilities for treatment on site.

The indictment alleges that on or before July 2006 and continuing until at least October 2007, the Tumas conspired to discharge and cause discharges of untreated wastewater to the Red River without a permit. Additionally, untreated wastewater was sent to Shreveport's publicly owned treatment works in violation of a requirement specified in Shreveport's approved pre-treatment program. Further, the indictment alleges that the Tumas also obstructed an EPA inspection in June 2007 by intentionally operating equipment in an improper manner.

The investigation kicked off as a result of an oil spill reported in Red River south of Shreveport by Sheriff's Department personnel in 2006. Field technicians from DEQ's Northwest Regional Office quickly launched an investigation and begun taking samples of water at various points along the river. Analyzing the compiled data, DEQ investigators were able to trace the oil sheen upstream to the vicinity of a 6-inch discharge pipe. As DEQ inquired into the source of the discharge pipe, they discovered several anomalies, including the unusual construction of the pipe and the atypical nature of the pipe's position below the water line at the point of discharge. Oil stains were observed on vegetation along the bank downstream of the discharge pipe, and thicker accumulations of oil were evident along the bank in several locations. DEQ field staff collected additional water samples from the river where the oil accumulated. Detailed photographs were taken of the discharge pipe as well as the riverbank and surrounding waterway.



A discharge pipe feeding untreated wastewater into Red River was traced back to ArkLa Disposal Services, Inc.



DEQ Environmental Scientist Tom Hardaway (right) takes a water sample at the ArkLa Disposal's south well



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DEQ's inquiry into the pipe traced its point of origin back to ArkLa Disposal Services, Inc. DEQ staff then began conducting several physical inspections along with unannounced site visits to the ArkLa facility. During the course of DEQ's inspection of the facility, two blind flanges were found to be inside the facility; one measuring 3-inches in diameter; the other 4 inches in diameter. The flanges connected to a piping system which was found to be a component of an extensive clandestine pipe installation which facilitated

a covert illegal discharge of untreated wastewater into Shreveport's publicly owned treatment works.

The case was transferred to the U.S. EPA's Criminal Investigation Division, who currently heads the investigation. The case is being prosecuted by the U.S. Attorney's Office and Environmental Crimes Section of the Department of Justice.

2011 ENVIRONMENTAL LEADERSHIP PROGRAM AWARDS

The 2011 Environmental Leadership Program Awards ceremony was held in March to recognize environmental achievements. New and existing members of ELP were commended for their voluntary pollution prevention efforts, community environmental education and outreach initiatives. The ceremony highlighted projects that went above and beyond regulatory compliance to substantially improve the quality of the environment.

Collectively, the efforts of ELP members in 2011 removed 212,433,714 pounds of pollutants from the environment, including Green House Gas emissions, criteria pollutants, copper catalyst, aerosol cans, solid waste, used oil, etc. Additionally, 189,562 kilowatt hours in energy usage were reduced through the "Green Team" Campaign. Members were able to reduce the usage of approximately 51 million gallons of water. Nearly three million pounds of material were recycled including 2.2 million pounds of recycled electronic waste and 600,000 pounds of "ZooDoo Gold" from Audubon Zoo.

The awards are listed below:

ExxonMobil (BR Refinery & Chemical Plant), Baton Rouge, LA: Earth Day Science Challenge

Special Recognition Award in Community Environmental Outreach for its first ever Louisiana Earth Day Science Challenge.

Monsanto Company, Luling, LA:

Carbon Footprint Reduction through Hydrogen Recovery Project

Large Business Achievement Award in Pollution Prevention for reducing natural gas consumption by 665,000 MMBTU by using recovered hydrogen.

PPG Industries, Lake Charles, LA:

Screening of Derivatives Copper Catalyst

Large Business Achievement Award in Pollution Prevention for the screening and reuse of used copper catalyst in fluidized reactor beds.

Valero St. Charles Refinery, Norco, LA:

CEMS Expansion and Data Management Program

Large Business Achievement Award in Pollution Prevention for developing a real-time system of emissions calculations and alert notifications.

Monsanto Company, Luling, LA:

Steam Condensate Recovery Project

Large Business Recognition Award in Pollution Prevention for re-using steam condensate (that was previously discharged) within a production facility to reduce water and energy consumption.

Valero St. Charles Refinery, Norco, LA:

Storage Tank Degassing Project

Large Business Recognition Award in Pollution Prevention for reducing volatile organic compounds emissions associated with emptying and cleaning large volatile organic liquid storage tanks.



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ExxonMobil Chemical Polyolefins Plant, Baton Rouge, LA: Landfill Gas Project

Large Business Recognition Award in Pollution Prevention for taking 85% of the gasses produced and previously being flared at the East Baton Rouge Parish North Landfill and using it as fuel in existing ExxonMobil boilers.

ExxonMobil Complex, Baton Rouge, LA: Arboretum and Learning Center

Large Business Achievement Award in Community Environmental Outreach for establishing a wildlife habitat on surplus property and providing education to children about wildlife habitat, conservation, ecology, urban forestry and biology.

Nalco Company, Norco, LA: Green House Gases Prevention

Medium Business Achievement Award in Pollution Prevention for the elimination of green house gases via the implementation of the product campaign initiative.

Alon Refining-Krotz Springs, Krotz Springs, LA: Solid & Hazardous Wastes Recycling & Reduction
Medium Business Recognition Award in Pollution Prevention for implementing a program to identify alternative means of solid and hazardous waste disposal.

Capital Area Corporate Recycling Council, Baton Rouge, LA: E-Recycling Events for 2010

Non-governmental Organization Achievement Award in Pollution Prevention for conducting 21 electronic recycling events with municipalities across the state and recycled over 150,000 pounds of material, including CPUs, monitors, printers, laptops, flat screen monitors, and mixed breakage items.

Bentley's Country Club Auto Repair and Collision, Inc., Lake Charles, LA: Limit Waste Project

Small Business Achievement Award in Pollution Prevention for starting a pollution prevention program focused on reducing the emissions released and waste generated by the auto repair shop.



Jennings High School

Jennings High School, Jennings, LA: Environmental Recycling Program

School Recognition Award in Community Environmental Outreach for their environmental recycle program, "Making a Difference."

Town of Grand Isle, Grand Isle, LA: Non-Point Source Runoff Improvements and Revegetation

Municipality Recognition Award in Pollution Prevention for combining non-point source pollution prevention and conservation systems while providing recreation and aesthetic opportunities for the public.

Audubon Zoo, New Orleans, LA: Implementation of Green Practices

Non-Governmental Organization Achievement Award in Community Environmental Outreach for implementation of green practices throughout all facilities and departments, resulting in measurable reduction in materials disposed in landfills, greatly increasing recycling efforts, and diminished use of electricity throughout the zoo.



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Louisiana State University, Office of Facility Services, Baton Rouge, LA:

University Achievement Award in Pollution Prevention for implementing waste reduction programs during one home football game as part of the 2010 EPA –WasteWise Game Day Challenge.

Harry Hurst Middle School Green Team, Destrehan, LA: Recycling Program

School Recognition Award in Pollution Prevention for establishing a campus-wide recycling program.

Louisiana State University, Office of Facility Services, Baton Rouge, LA: Sustainability & Recycling Social Media Communication

University Recognition Award in Community Environmental Outreach for expanding its use of technology to communicate campus sustainability and recycling information and issues through its sustainability website, Facebook page and sustainability listserv.

2011 ENVIROTHON

The 2011 Louisiana Envirothon was held on April 2 on the University of Louisiana at Lafayette's Cade Farm. Ten teams consisting of high school and junior high school students from across Louisiana participated. The Louisiana competition is centered on testing categories: soils, forestry, current issue, wildlife and aquatics. The teams also participate in an oral presentation on an environmental problem. The teams compete for scholarships at the North American level and competed for a chance to go to the North American Envirothon competition Sackville, New Brunswick, Canada.

The schools that participated this year included a team from the Audubon Zoo in New Orleans; Beau Chene High School's Future Farmers of America teams one and two; Comeaux High School; Louisiana School for Math, Science and the Arts – teams gold and blue; Live Oak High School's Future Farmers of America teams one, two and three; and Zachary High School's Future Farmers of America team.

ENVIROTHON WINNERS



First Place Winners, LSMSA Blue



Second Place Winners, Audubon Zoo



Third Place Winners, LSMSA Gold



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First Place in the competition went to LSMSA Blue Team, the Audubon Zoo Team won second place and third place went to LSMSA Gold Team.

NETDMR

In 2009, Louisiana became the first state to electronically receive a discharge monitoring report. A discharge monitoring report, also known as a DMR, is a self-reporting document that is generated by permittees that have a Louisiana Pollutant Discharge Elimination System permit. The DMR contains information pertaining to discharges into waters of the state.

Since the system has been in place, 44 facilities have used the web-based tool that allows facilities to submit DMR electronically. More than 1,265 DMRs have been submitted through fiscal year 2011.

“The NetDMR is an example of the positive steps DEQ has made in offering electronic business options,” DEQ Secretary Peggy Hatch said. “When permittees use the electronic option, it saves them time and resources, as well as the agency. We know the report will be accurate when it’s received. Because of this, DEQ employees don’t have to spend a large amount of time proofreading the reports and our personnel can better utilize their time. To use an old cliché, this is a win-win for everyone.”

DEQ continues to offer opportunities for people who submit DMRs to use the web-based submitting tool. There are upcoming training classes offered in Baton Rouge on May 12 and Jennings on July 25. For more information, go to www.deq.louisiana.gov/netdmr.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY'S FIRST QUARTER SUMMARIES

1st Quarter 2011 Enforcement Actions:

<http://www.deq.louisiana.gov/portal/tabid/225/Default.aspx>

1st Quarter 2011 Settlement Agreements:

<http://www.deq.louisiana.gov/portal/tabid/2838/Default.aspx>

1st Quarter 2011 Air Permits:

<http://www.deq.louisiana.gov/portal/tabid/2922/Default.aspx>

1st Quarter 2011 Water Permits:

<http://www.deq.louisiana.gov/portal/tabid/2899/Default.aspx>

1st Quarter 2011 Solid and Hazardous

Waste Permits:

<http://www.deq.louisiana.gov/portal/tabid/2586/Default.aspx>

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