

Douglas E. Irvin, PE

Doug is Vice President of Environmental Affairs at Darling Ingredients Inc. (DAR). Darling's 10,000+ employees, with its subsidiary companies Griffin Industries, Bakery Feeds, Terra Renewal Resources, and others, provide a global growth platform for the development and production of sustainable natural ingredients from edible and inedible bio-nutrients through diverse processing operations spread over five continents. Darling combines to be the world's largest recycler of beef, poultry, pork, used cooking oils, and bakery by-product and residual streams into commodity ingredients such as tallow, feed-grade fats, meat and bone meal, poultry and feather meals, carbohydrate meals, hides, and fuel ingredients sold to the world agricultural, pet food, leather, oleo-chemical, and biodiesel manufacturing markets. The Company also provides restaurant and commercial grease trap maintenance and collection services and sells used cooking oil collection equipment to restaurants. Darling's joint venture with Valero Energy has successfully brought to production the Diamond Green Diesel Plant connected to Valero's Norco, Louisiana refinery, to process recycled animal fats and used cooking oils into 9300 barrels per day of renewable synthetic diesel fuel that has comparable properties to petroleum-based diesel, and meets ultra-low sulfur and low-carbon fuel standards and can be shipped by pipeline.

Doug graduated from the Mississippi State University (go DAWGS!) Swalm School of Chemical Engineering in 1981, and from the University of New Orleans MBA night program in 1987 focused in Operational Finance. He spent 10 years with Mobil Oil working offshore and onshore oil and gas fields and natural gas process engineering. His interest in developing environmental, health and safety initiatives took him into private consulting. He returned to industry with Exide Technologies, producer of automotive and marine batteries in high-volume manufacturing where he obtained significant experience in lean manufacturing management concepts. Doug returned to consulting in his home state of Mississippi and was soon challenged with being selected for the Governor's core leadership group that directed the recovery efforts from Hurricane Katrina, and the unprecedented debris streams. Doug joined Griffin Industries in 2006, which subsequently sold to Darling in 2010, where he now has corporate responsibility for environmental affairs. The company operates over 200 packaged boilers in the 30 to 70 mmBtu/hr range, along with process emissions, under permits ranging up to Title V PSD Synthetic Minor. The company operates a diverse suite of biological wastewater treatment plants under NPPDES and Pre-treatment permits.

15 Minute Topic for Discussion – CIBO Conference, Santa Fe

Regulatory Challenges of Small Packaged Boilers and the Fuel Switching Rules under the Boiler GACT (JJJJJ).

- Facilities combine boilers to capacities routinely over 100 mmBtu/hr capacity, with a few over 250 mmBtu/hr (“List of 20”).
- Most facilities have interruptible natural gas fuel agreements.
- Primarily fire natural gas, but most facilities permit for alternative liquid fuels as protection against potential natural gas interruptions and pricing volatility.
- Natural gas interruptions and pricing volatility are considered to be a significant near-term risk, that is increasing rapidly, enhanced (created) by the “all eggs in one basket” mentality (natural gas) – aka, “War on Coal” and liquid fuels. This risk is mitigated by fuel flexibility (or is believed to be).
- Produced recycled animal and vegetable (cooking oil) fats are excellent boiler fuel, with very low emissions (low particulate, no/low-HAP, no/low sulfur, and low carbon). The surrogate particulate (to HAPs/Hg) concepts of the Boiler GACT/MACT are completely inaccurate relative to combustion of these fats-based fuels.
- The National Renderers Association submitted comment letters (primarily authored by Mr. Irvin with assistance from Mr. Brad James of Trinity Consultants) and data to the US EPA during the JJJJJJ and DDDDD reconsiderations, with specific request to create specific fuel subcategories for recycled animal and vegetable fats-based fuels that would be treated much as the gas subcategories. The data to support the argument was extensive and conclusive – no HAPs, low sulfur, low particulate – clean burning. The US EPA essentially ignored these.
- State agencies are operating in fear of the US EPA and mostly NGG pressure. Previous business-friendly environment to find common ground and support business and jobs growth has given way to the opposite extreme of disregard to the pressures created by regulatory over-reach. There is no more listening.
- State agency staff often does not understand the JJJJJJ fuel switching provisions, which are not that complicated. The staffs have often not taken the time to learn this or have not been adequately trained. Even more senior staff can be confused, and worse, do not wish to learn and listen (predisposed against discussion).
- Permitting of liquid fuels is confused with (creates confusion with) the allowable fuel switching provisions. Agencies often assert that the boilers are operating in the liquids fuels subcategories, and not the gas subcategory, only because of the permitting (regardless of fuels being fired), and therefore must perform to the work practices of JJJJJJ.
- State agencies are requiring the JJJJJJ (and DDDDD) rules to be regurgitated in permits, only because the permits also include liquid fuels. As the rules have changed (reconsidered), the permit requirements become obsolete.
- Significant staff effort and costs are being consumed to correct this.