



Sometimes ULSD with 15 ppm of sulfur may be contaminated with higher sulfur fuel (up to 500 ppm) due to tank residues or mixing because of supply problems. In that case, the fuel must be “downgraded” —labeled and sold as “Low Sulfur Diesel.” The EPA limits downgrading to a maximum of 20% of the facility’s annual fuel volume.

The EPA also requires central fueling operators to save invoices or other transfer documents for five years. These must show vendor and purchaser name and address, fuel volume, designation (highway or non-highway), and sulfur content of the fuel.

Using the new fuel will require some adjustments, but the expected benefits in improved air quality and reduced health effects will be substantial.

For more information on regulations, benefits, and voluntary retrofits go to the US EPA Web site:
www.epa.gov/otaq/

To download fuel dispenser labels go to: <http://api-ep.api.org/publications/index.cfm> and click on the “API Suggested Diesel Pump Labels” link.

Biodiesel B20 works fine for UW–Madison

IN FEBRUARY 2005, the University of Wisconsin–Madison began stocking their on-campus bulk fuel tank with B20, a blend of 80% ultra-low sulfur diesel and 20% soybean-based biodiesel. All campus-based diesel equipment gets fuel from this tank. Last year they used nearly 50,000 gallons.

“Anything that needs to use diesel and visits that tank gets the biodiesel blend. No one has complained about it or at least no complaining has reached my ears,” says James Bogan, the campus’ Fleet Program Officer.

When asked, one driver hadn’t noticed any difference, while another said he has changed the way he operates a loader to compensate for lower power. “Do I think it’s worth it?” he volunteered. “Yes, I do. I have kids.”

Overall fuel economy does not seem to have changed with the B20, but it is hard to know definitively without following scientific measurement standards.

“Different load characteristics probably have a much greater effect on fuel economy than the fuel type,” Bogan says. “Different drivers, traffic conditions, and weather also have an impact.”

Cold temperatures affect blended fuel. Biodiesel turns to gel sooner than petroleum diesel, so it is important to watch the thermometer and put winter fuel additives in the tank a bit sooner.

The campus tank is supplied through a state bid contract. The jobber delivers B20 that is “splash blended” by adding biodiesel to ULSD in the truck. As with many

other state contracts, local governments can choose to purchase their fuel at the state’s bid price by piggy-backing on the state’s contract.

While biodiesel prices are still higher than petroleum diesel, the annual cost is a very small part of the UW-Madison fleet budget. “Our thinking was: let’s be leaders in



being environmentally responsible,” says Bogan. “We can afford this to help purchase cleaner air, and use our experience to help other folks. We can reassure people that they won’t have operational difficulties with this fuel.”

As prices for crude oil and refined fuels keep spiraling upward, the arguments for using biofuels are more persuasive. At the same time, prices for biodiesel are likely to be more stable, especially in Wisconsin which is a major soybean producer. Biodiesel production is growing fast—75 million gallons in 2005 up from 2 million gallons in 2000. One biodiesel manufacturing facility is already operating in Manitowoc, a second in DeForest is expanding, and construction is expected to start soon on a third in the south central region.

“The logistics make sense when you have a large enough bulk tank,” says Bogan. “If you’re buying in amounts less than the size of a semi, then it becomes more difficult to deal with.” Those difficulties are likely to diminish as biodiesel production, distribution, and use go up.

Are you paying too much for fuel?

Compare your rates to the state’s by checking Vendornet: <http://vendornet.state.wi.us>. On the home page click “General Procurement Information” then select “Weekly Oil Pricing.”

Save by piggy backing. The state’s “Municipal Cooperative Purchasing Service” can save local municipalities 20%-60% off retail prices, and reduce staff time to research and bid contracts. Information is available from Vendornet at: <http://vendornet.state.wi.us>

“We use a 5% soybean bio-fuel blend and buy 21,000 gallons a month. The cost is about 2 cents a gallon more, but the trucks smoke less and have better response.”

– Dave Lyga
Shop Superintendent
Trempealeau County
Highway Department

BIODIESEL FACTS

- Biodiesel is biodegradable, nontoxic and free of sulfur and aromatics.
- Biodiesel is the only alternative fuel to have successfully completed the Environmental Protection Agency (EPA)-required Tier 1 and Tier 2 health effects testing under the Clean Air Act.
- Research on biodiesel performance in engines is based on 50 million miles of use.
- Production of biodiesel is local not international, and will help increase local farm incomes.
- The use of biodiesel does not void parts and material workmanship warranties of any major US engine manufacturer.

Source: National Biodiesel Board, www.biodiesel.org



PHONE
800.442.4615

FAX
608.263.3160

EMAIL
tic@epd.engr.wisc.edu

WEB SITE
<http://tic.engr.wisc.edu>

 Wisconsin
LTAP

FALL 2006

3