

Oxyfuel alternative presented

By DONALD W. MEYERS
The Daily Herald

Provo officials think they have found a replacement for oxygenated fuel.

Mayor George O. Stewart said a study this summer with city vehicles found that a fuel additive created by a city-based company can reduce carbon monoxide and smoke emissions, as well as improve fuel economy.

Stewart announced the findings Thursday at the city Public Service Department's fuel depot. He also announced that the city was expanding the use of Provo-based UHI Corporation's FPC-1 additive to the entire city motor pool.

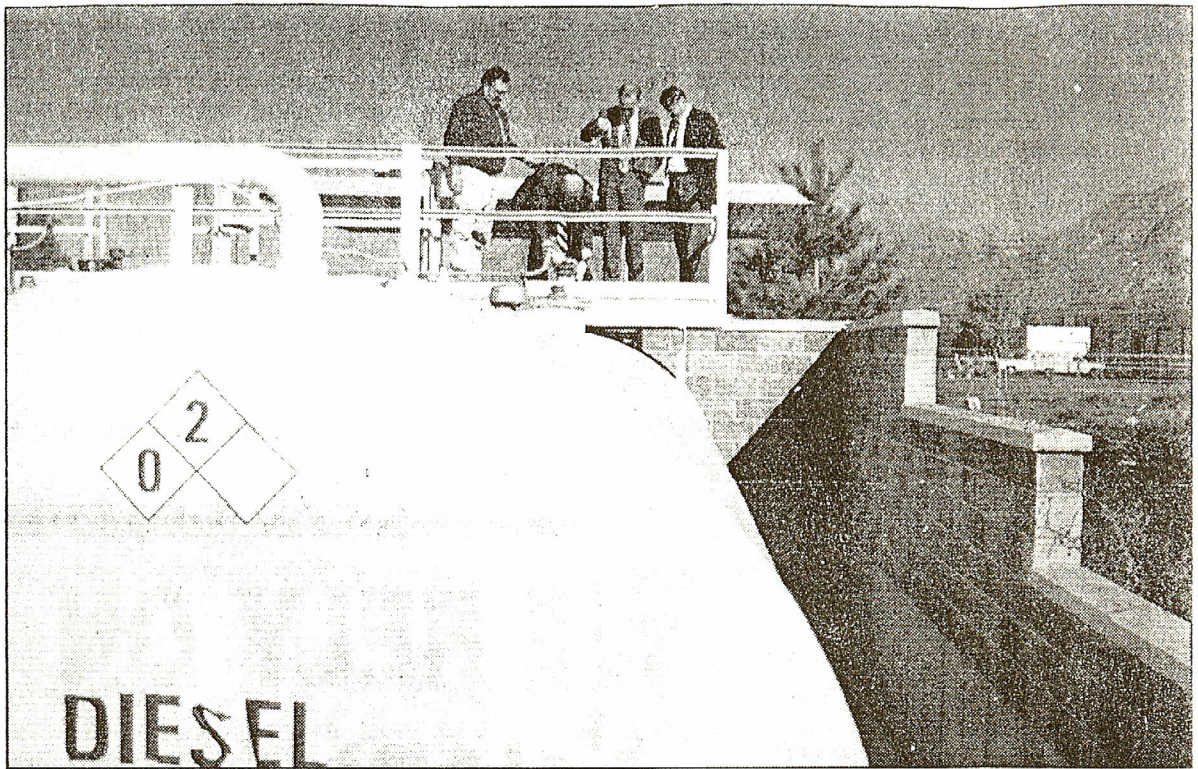
To commemorate the announcement, Stewart and UHI President Lee R. Pope poured a gallon of the additive into a 5,000-gallon diesel fuel tank.

Stewart said the use of the additive was one of several steps the city is taking to reduce carbon monoxide and find alternatives to the U.S. Environmental Protection's mandate for oxygenated fuel.

Utah County motorists are required by federal regulations to use oxygenated fuel each winter to reduce carbon monoxide emissions in Provo and Orem. But critics claim the fuel makes engines sluggish, fouls filters and generates nitrogen oxide, a gas that combines with other pollutants to form particulates.

Pope and National Sales Manager David M. Stewart said the additive does not have the negative side effects associated with oxygenated fuel.

Unlike oxygenated fuel, which uses grain alcohol or other oxygen-boosting chemicals to



Daily Herald Photo/Jason Olson

Mayor George Stewart and other city and company officials pour a gallon of fuel additive into the city's supply of diesel fuel, kicking off the total use of the new chemical that should reduce emissions and increase the fuel economy of the city's fleet.

make the fuel burn cleaner, FPC-1 uses a chemical that ignites the fuel-air mix in several places at once, ensuring that the fuel burns completely.

UHI's Stewart said the more thorough combustion also cleans debris out of the engine's combustion chamber, making the engine run more efficiently and with less wear and tear.

Since the additive doesn't use any oxygen-boosting chemicals, Pope said there is no significant increase in nitrogen oxide emissions.

While oxygenates must be used in concentrations as high as 3.5 percent, a single gallon can treat 5,000 gallons of fuel.

The additive costs \$125 a gallon, which works out to 2.5 cents for each treated gallon of gasoline.

Unlike oxygenates, which are only used in gasoline, FPC-1 can be used in any petroleum-based

fuel.

After using the additive in commercial and industrial fleets, such as Jack B. Parson Co. in Ogden, UHI approached Provo about using it in the municipal fleet.

The Provo test involved 10 diesel vehicles and nine gasoline-powered vehicles. The vehicles were tested, given the additive and retested two months later.

Public Services Director David Gunn said the results showed a 30 percent carbon monoxide reduction for the gasoline engines and 6.7 percent decrease for diesels. The diesels also experienced an 18.4 percent smoke reduction.

In addition to reducing pollutants, Gunn said the additive boosted fuel economy by 7.8 percent in diesel engines, and 8.3 percent in gasoline engines.

"I'm enthusiastic about any product that will clean the air and save us money," Stewart said.

While FPC-1 is not the ultimate solution, Stewart said it is one step in the process.

Pope said the process has not been turned into the U.S. Environmental Protection Agency for pollution-reducing credit, but he said that will be done in the near future.

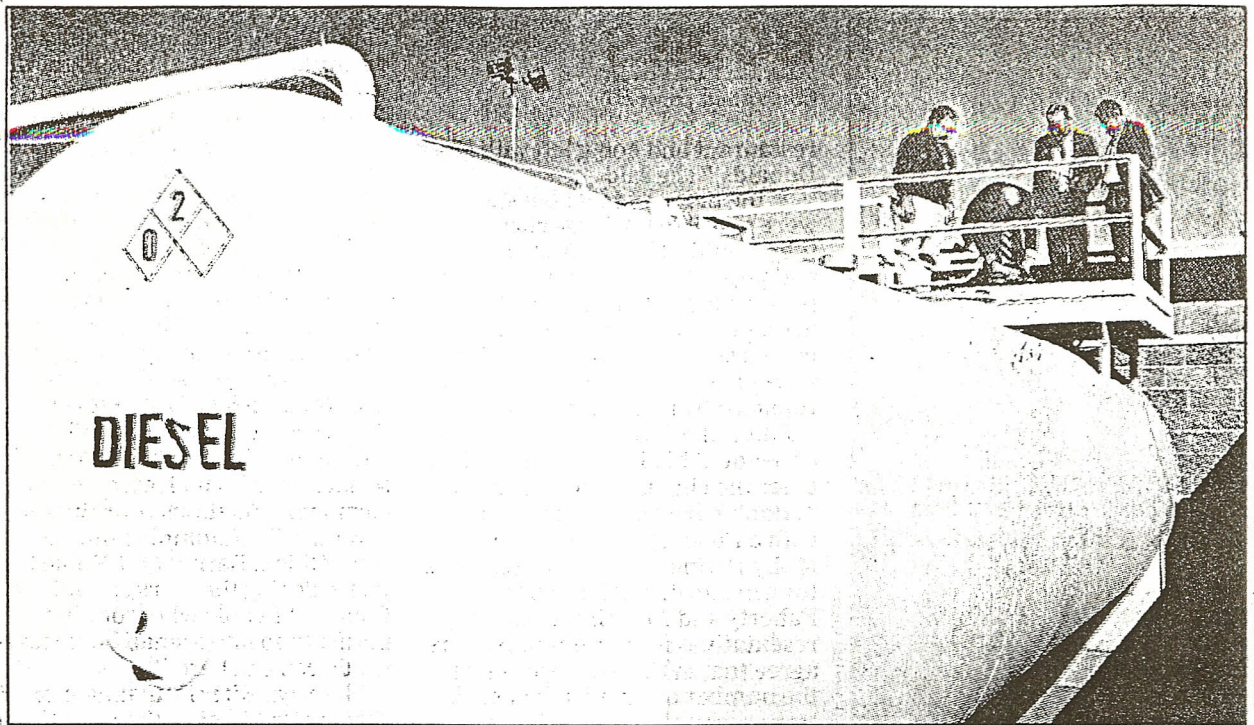
He anticipated sending the additive out to retailers in 1996.

Stewart said the city would consider submitting it as part of its quest for alternatives to the EPA-mandated oxygenated fuel program.

The other steps the city has taken to reduce air pollution are synchronizing the traffic lights on the main roads in Provo and banning left turns at the Center Street-University Avenue intersection.

The EPA said it would allow alternative methods to be used if state and local environmental officials prove they can work.

file 3, 1995



STUART JOHNSON, DESERET NEWS

Provo Mayor George Stewart, kneeling, adds fuel catalyst that was developed by local firm to diesel tank.

Nov 3, 1995

CITY FLEET

Provo will test new fuel additive for better mileage, lower pollution

By Dennis Rombo
Deseret News staff writer

PROVO — City officials believe part of the answer to Utah Valley's automobile pollution problem lies in the gallon of black liquid Mayor George Stewart poured into a 5,000-gallon tank of diesel fuel Thursday.

The diesel, treated with a fuel catalyst called FPC-1, will be pumped into city vehicles, which will emit less carbon monoxide and get better gas mileage — if results of a recent study hold true.

The city allowed Provo-based UHI Corp. to test its fuel additive in 19 diesel- and gasoline-powered trucks and police cars this summer. The substance is designed to improve fuel-burning efficiency. Stewart said the results exceeded all expectations.

Fuel consumption dropped 8 percent, saving the city 5.5 cents per gallon, he said. Carbon monoxide emissions and smoke output decreased an average of 14.2 percent and 18.4 percent, respectively, according to UHI field tests.

The vehicles logged about 500 hours on the road from June to August.

The results prompted Provo to add FPC-1 to the gas tanks of its

entire fleet. The highly concentrated formula, the active ingredients of which are proprietary according company President Lee R. Pope, can be mixed at a ratio of 5,000 gallons of fuel to one gallon of additive.

Stewart said too much time is spent talking about air pollution and too little time is spent doing something about it. "I think what we're looking for is solutions," he said.

Pope, who helped found UHI in 1979, cautioned those at a Thursday news conference not to expect FPC-1 to be the final solution.

"We're not saying this product is a cure-all and that it can take care of all the air-pollution problems," he said, adding it can play a significant role.

Barbara Cole, state Division of Air Quality mobile sources section manager, who received a copy of UHI's test results Thursday, said there weren't enough technical data for her to draw a conclusion. But of the many inventions the division is asked to review, ranging from absurd to promising, she said FPC-1 leans toward the latter.

"I think it deserves further study," Cole said. The state, however, doesn't have the laboratory for such research.

UHI has spent \$3.5 million in the past seven years researching, developing and marketing the product. It has been successfully tested at Brigham Young University and the Southwest Research Institute in San Antonio, Texas, Pope said.

David M. Stewart, UHI sales manager, said the scientific backing sets FPC-1 apart from other fuel catalysts that don't live up to manufacturers' claims. "We've done our homework," he said.

UHI has several industrial clients, including trucking companies and a railroad. The company approached Provo for the joint study as step toward breaking into retail sales.

Pope said the company intends to have FPC-1 on the market early next year. He also wants to try to sell it to local gasoline and diesel distributors that would make it available at the pump. The additive would have to meet ever-stricter U.S. Environmental Protection Agency regulations before that could happen.

Although Stewart was initially skeptical about the product, he intends to pitch it to other cities, businesses and organizations with large fleets.

Daily Herald (Provo)
Dec 21, 1995

even though this year it is only
ie said. "What I don't like is auto
creases without public hearings."
ite Carfile's opposition, the ordi
as approved 5-2. Carfile and Coun
Greg Hudnall were the only dis-
The salary increase is the second
d by the council in two years. In
1994, council members increased
laries from \$6,000 to \$7,500 annual-

o is Utah's second largest city in
of population. The increase moves the
into a tie with St. George for the sev-
ghst council salary in the state.
Lake City Council members make the
- \$13,932 annually. Members of the
City Council make \$6,000 per year.

Fuel additive gets support from county

By DONALD W. MEYERS
The Daily Herald

Lee Allen wants Utah County
and the state to get behind a Provo
company's fuel additive and push
it as a replacement for oxygenated
fuel.

Allen, executive director of the
Provo-based Citizens for Environ-
mental Common Sense and a
member of the county Clean Air
Commission, persuaded the com-
mission Tuesday to direct county
officials to encourage the use of
UHI's FCP-1 fuel additive in gov-
ernment fleets and to urge the state
to persuade the U.S. Environmen-
tal Protection Agency to adopt it.

UHI's fuel additive uses an iron
compound to make gasoline or
diesel fuel burn more thoroughly
in an engine's combustion cham-
ber.

In a recent test with Provo's
municipal fleet, the fuel additive
created a 14.2 percent carbon
monoxide reduction and an 8
percent increase in fuel econo-
my.

One gallon of the additive
treats 5,000 gallons of fuel. By
comparison, refiners need to mix
between 500 and 750 gallons of
grain alcohol into gasoline to cre-
ate oxygenated fuel.

With the results of the Provo
study, Allen said the state and the
county need to begin lobbying the
EPA to evaluate the additive and
provide the proper pollution
reduction credits for the sub-
stance. If approved, the county
could consider using it to replace
oxygenated fuel in the
Provo/Orem carbon monoxide
reduction plan.

"We have something that is
promising. We ought to champion
it," Allen said.

But that is not an easy task for
the state. Barbara J. Cole, manag-
er of the state Division of Air
Quality's Mobile Sources Section,
said the DAQ lacks a laboratory to
conduct environmental tests.

Without a lab, Cole said the
state cannot present sufficient evi-
dence to support the fuel's use.

But the DAQ can use its influ-
ence with EPA officials to get the
agency to consider the fuel addi-
tive and conduct its own tests,
Allen said.

"I would like to see one-tenth
the effort behind this that is push-
ing I/M 240," he said, referring to
the enhanced emissions testing
program the state is suggesting for
Utah County. "You're willing to
impose a trip reduction plan on
businesses that will do zilch, and
do it with sanctions."

Nick Jones, Provo's city engi-
neer, said the EPA needs to con-
sider alternatives. With oxygenat-
ed fuel being one of the main
methods to reduce carbon monox-
ide, Jones said the EPA and the
DAQ needs to examine alterna-
tives in case the method is deemed
ineffective.

But, Jones said, government
tends to move in "geologic" time
when it comes to taking action.

The commission agreed to
direct the Utah County Commis-
sion to create an inventory of
county and municipal fleets that
could use the fuel and provide data
for EPA evaluation.

Nation**Cat dials 911,
saves own life**

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Local**Cannon wants 10
debates with Orton**

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Lifestyle**UVRMC welcomes
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Sports**Late home run
lifts NL to win**

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The Daily Herald

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Central Utah's Newspaper for 122 Years, Provo, Utah

50 cents

Bertha sends Carolinas scrambling

By ESTES THOMPSON
Associated Press Writer

NAGS HEAD, N.C. — Hurricane Bertha and its 100 mph winds swirled offshore today on a path toward the Carolinas, kicking up surf and turning bustling beaches into ghost towns. North Carolina's governor declared a state of emergency.

Evacuation orders were lifted in Florida early today. But down the lone highway along North Carolina's Outer Banks between Nags Head and Cape Hatteras, restaurants and stores were closed. Rental cottages were empty and campgrounds deserted.

Computer models predict Bertha will probably make landfall in North Carolina, perhaps by midnight, with storm-force winds being felt as early as this afternoon. There's a small chance it could then continue up the coast but more likely would be offshore as it moves northward, forecasters said.

Woodbridge, Va., loaded belongings into their station wagon at Nags Head for the trip home.

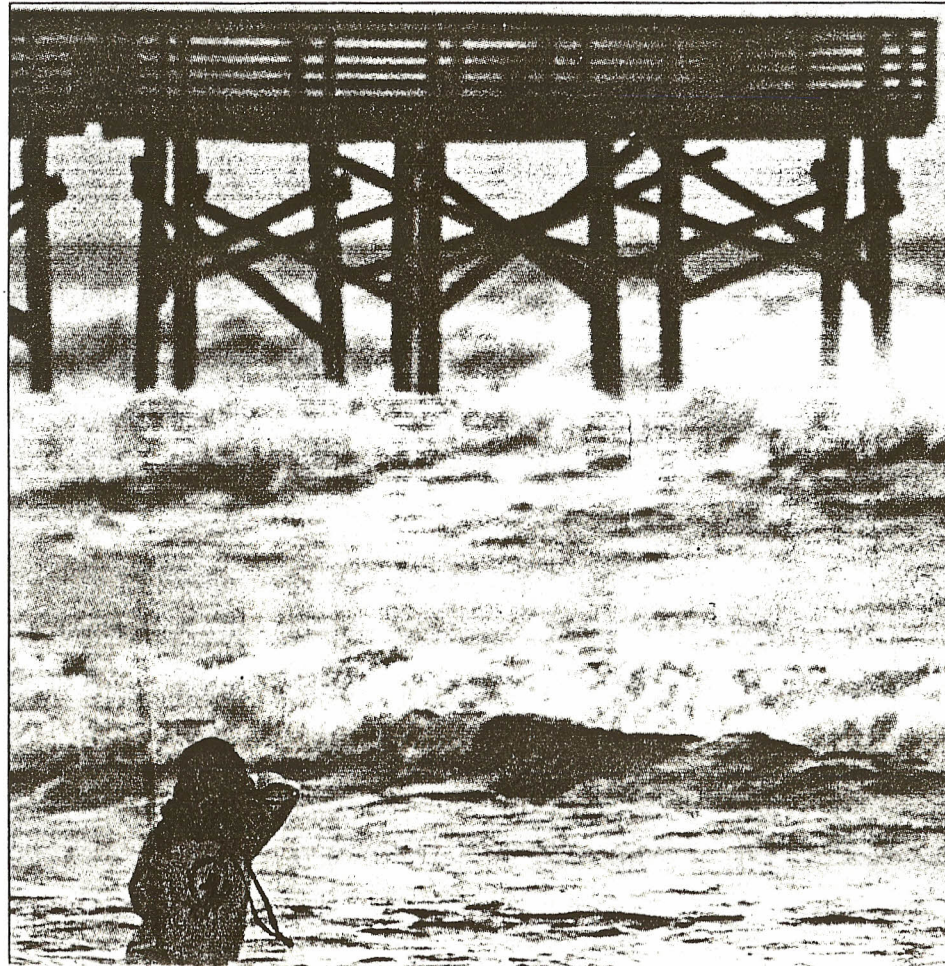
"We're two for two. We've been to North Carolina twice," Kumanga said. "Felix ran us out last year, and now Bertha this year."

More evacuations were expected today in other counties along North Carolina's southern coast and northern sections of South Carolina.

"It's in a frenzy," said Chris Fink, night auditor at Shell Island Resort Hotel at Wrightsville Beach, N.C. "Everyone's checking out."

Ocean swells today reached 15 feet in the waters off Wilmington, and coastal flooding could begin late today. Storm tides of up to 10 feet are expected if Bertha reaches land during high tide Friday morning, and rainfall totals in the hurricane's path could reach 8 inches, according to the National Weather Service.

"There is going to be a land-



Additive proves a success

Product cuts costs, emissions

By DONALD W. MEYERS
The Daily Herald

A Provo company's fuel additive is not only cleaning up the city motor pool's emissions, but it is saving Provo city some money.

Dave Gunn, Provo's Public Service director, announced that an evaluation of the city's fuel consumption shows a 5.2 percent reduction as a result of using UHI Corp.'s FPC-1 fuel catalyst additive.

The city began using the additive in the motor pool fuel supply in November after initial tests with city vehicles showed a 14.2 percent carbon monoxide reduction, 18.4 percent less smoke from diesel engines and an 8 percent fuel consumption reduction.

Gunn said the 5.2 percent reduction figure released Wednesday was based on using the FPC-1 additive for half a year. When the data is extended to a full year, he said it comes close to the 8.1 percent reduction the company promised.

The savings amount to 5.5

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The savings amount to 5.5 cents per gallon.

Gunn said emissions tests show the vehicles are continuing to emit less carbon monoxide.

Provo and Orem are under federal orders to reduce carbon monoxide levels. The state Division of Air Quality proposed a plan using oxygenated fuel, which has been in use since November 1992, enhanced emissions testing and fireplace restrictions to tackle the problem.

Critics of oxygenated fuel — gasoline mixed with grain alcohol or other oxygen-boosting additives to make it burn more thoroughly — claim it robs cars of gas mileage, fouls fuel filters and creates excess nitrogen oxide emissions that combine with other pollutants to form PM10.

Lee Pope, UHI president, said FPC-1 reduces carbon monoxide without generating the nitrogen oxide emissions.

The additive works by making the gasoline-air mixture in the engine's combustion chambers ignite faster, thus burning more

(See ADDITIVE, Page A2)

ADDITIVE:

(Continued from Page A1)

thoroughly and producing less pollutants.

Unlike oxygenated fuel, the additive achieves its combustion efficiency without boosting the oxygen content, one of the sources of nitrogen oxide emissions.

A side benefit of the additive is that it allows the engine to run more efficiently.

"Internal combustion engines require less fuel to do the same work if you improve the ignition characteristic so more combustion occurs in a shorter period of time," Pope said.

The city's results verify the company's claims about its product, Pope said. Previously, the additive was used in industrial and commercial fleets, such as Fred Meyer's truck fleet with improved emissions and fuel efficiency.

Unlike grain alcohol, which must be mixed at 10-15 percent levels to be effective, FPC-1 is added in concentration of one gallon to 5,000 gallons of gasoline. The additive can also be put in diesel fuel to reduce smoke and soot emissions.

But, UHI still has a long way to go before its product will be available as a replacement for oxy-

genated fuel on a widespread scale.

Pope said U.S. Environmental Protection Agency does not recognize UHI's test data because it does not follow federal protocol.

UHI's field tests, Pope said, are as accurate as the EPA laboratory tests. "The EPA is still heavily involved with alcohol fuels," he said.

But Jeff Houk, an EPA environmental engineer, said the agency insists its test protocols be used in examining new additives in order to provide an accurate comparison with known control measures.

Barbara J. Cole, manager of the state Division of Air Quality's Mobile Sources Branch, said the state cannot evaluate the additive until it sets up its own laboratory at Weber State University, where tests

can be conducted to EPA standards.

Meanwhile, Pope is hoping the success in Provo will encourage other communities to try the additive.