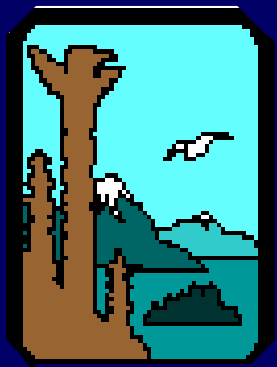


New Federal Diesel Fuel Regulations, Impacts on Rural Alaska, And Alaska's Recommendations

by Ron King



Alaska Department of Environmental Conservation

410 Willoughby Avenue, Suite 303

Juneau, AK 99801

907-465-5100

clint_farr@envircon.state.ak.us

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Presentation Overview

- History
- Possible Impacts
- Alaska's Rural Recommendations

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: The EPA Rules for Urban Alaska

- **ON-HIGHWAY** - reduce air pollution from large trucks and buses starting in 2007.
- **NON-ROAD** - reduce air pollution from large non-road mobile sources (graders, construction equipment) starting in 2010.



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: The EPA Rules

- Sources partially included
- marine and locomotives



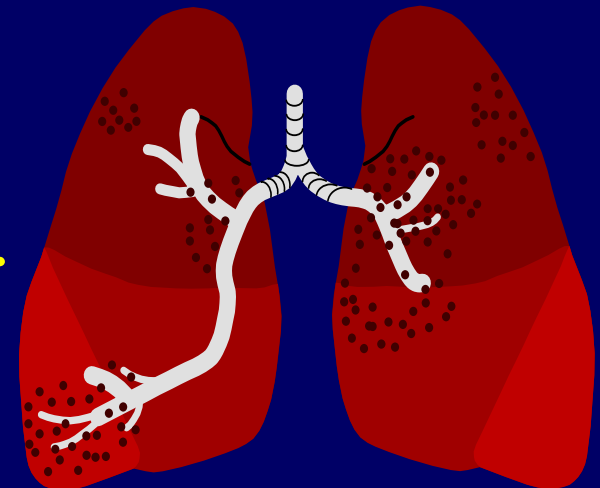
- Sources NOT included
home heating and power
generation (yet)



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: Why is ultra-low sulfur diesel needed? Air Quality Impacts and Health

- Using the new fuel will reduce air pollution from diesel sources.
- Particulate Air pollution triggers asthma attacks, causes lung cancer, respiratory illness, and increased mortality.
- Air pollution can cause hazy skies.



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: Why is ultra-low sulfur diesel needed?

Technical/Legal

- Sulfur causes damage to new emission controls.

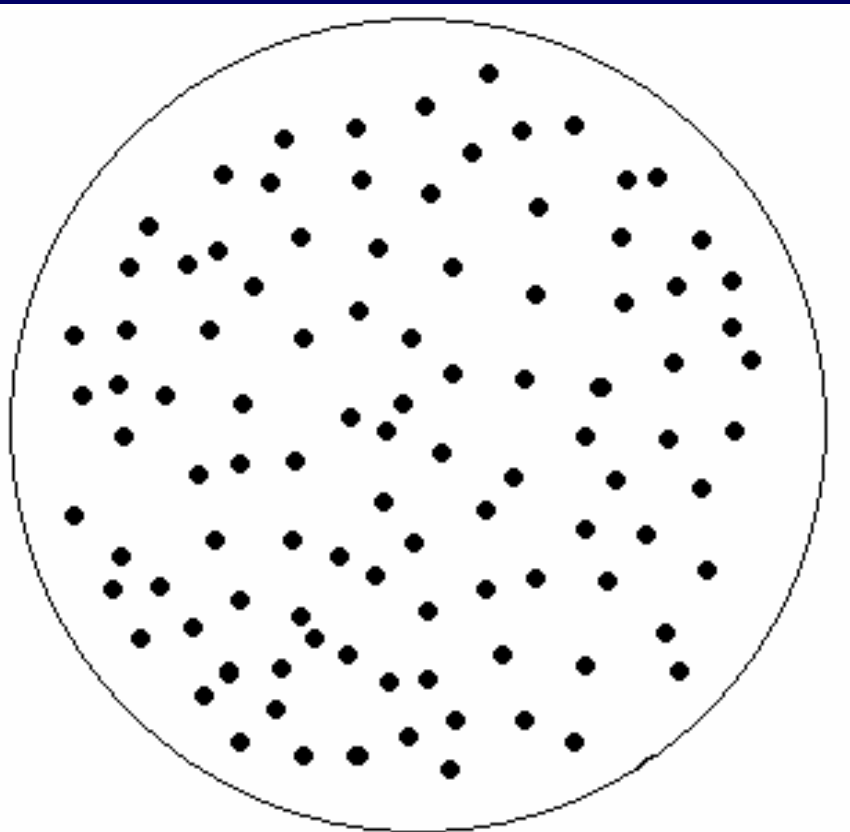


- Use of ultra-low sulfur diesel is needed for correct operation of the new emission controls.

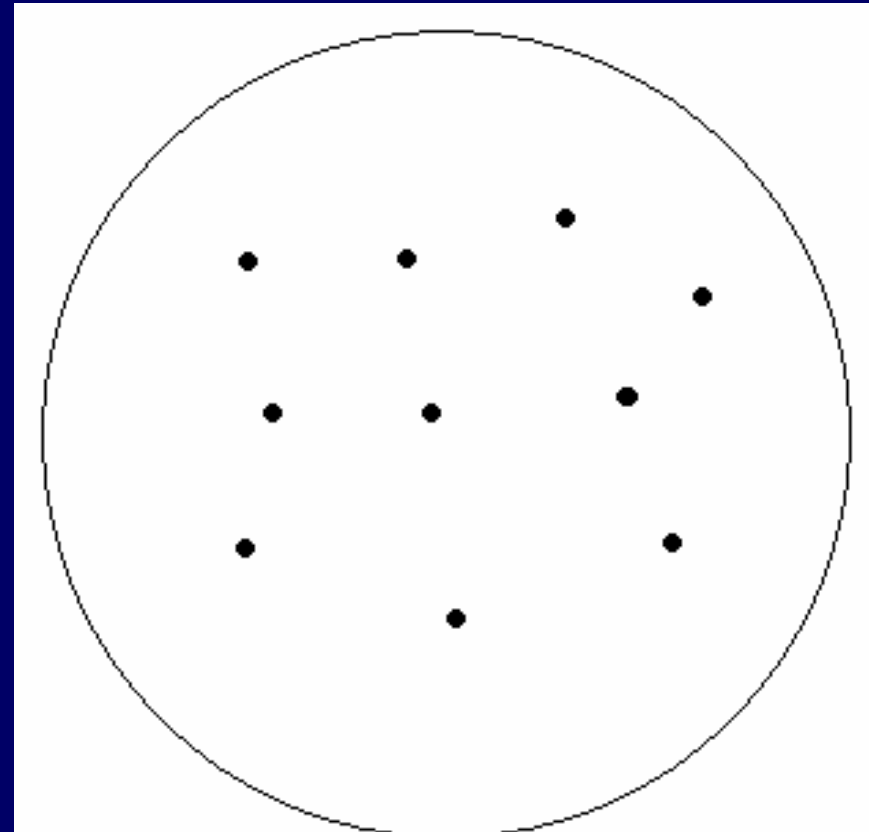
- Operators of 2007 heavy-duty diesel trucks must use ultra-low sulfur diesel or risk potential engine damage, loss of warranty, and federal penalties.

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Higher Sulfur Fuel
No Emission Control



Ultra Low Sulfur Fuel
Oxidative Catalyst &
Particulate Trap (90%)



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Rural Distribution Impacts

- Transportation of fuel to rural Alaska poses unique challenges.
- May be difficult to find ultra-low sulfur diesel meeting arctic grade fuel requirements.
- Dual tank systems for separating ultra-low sulfur diesel from other fuels may be expensive.

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

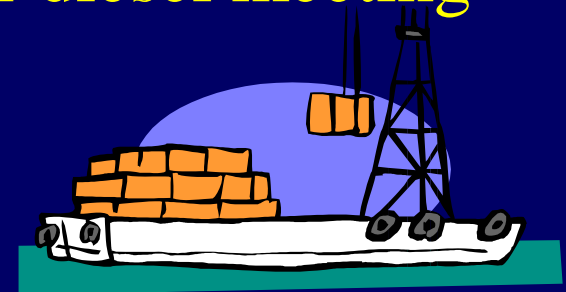
Truck Owner Impacts

- May be difficult to find ultra-low sulfur diesel meeting arctic grade fuel requirements.
- Operators of 2007 heavy-duty diesel trucks must use ultra-low sulfur diesel or risk engine damage, loss of warranty, and federal penalties.
- Use of ultra-low sulfur diesel in 2006 and older vehicles is not expected to cause problems.

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Challenges to Rural Alaska

- Ultra-low sulfur fuel may be \$0.10 per gallon or more than the current cost of diesel.
- Costs to rural Alaska will likely be higher due to Alaska's unique distribution challenges.
- May increase costs of home heating and power generation.
- May be difficult to find ultra-low sulfur diesel meeting arctic grade fuel requirements.
- May require new set of tanks.



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Alaska's Urban Recommendations

Urban

All areas of Alaska on the road system or with regular, year round state ferry service

For the On-highway and Non-road rules:

Follow the EPA's implementation timeline

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Alaska's Rural Recommendations

On-highway

“Hands off” until a one step transition to 15 ppm
in 2010

Non-road

a 2010 turnover to 15 ppm

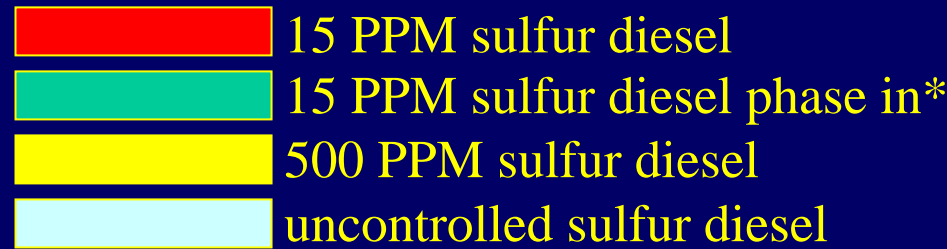
- coincides with on-highway recommendation
- simplifies

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: The EPA Rules

Timelines - National rule & Urban Alaska Timeline

Dates



2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

On-highway



Non-road



Marine and Locomotives



Home Heating and Power Generation - not included in rules

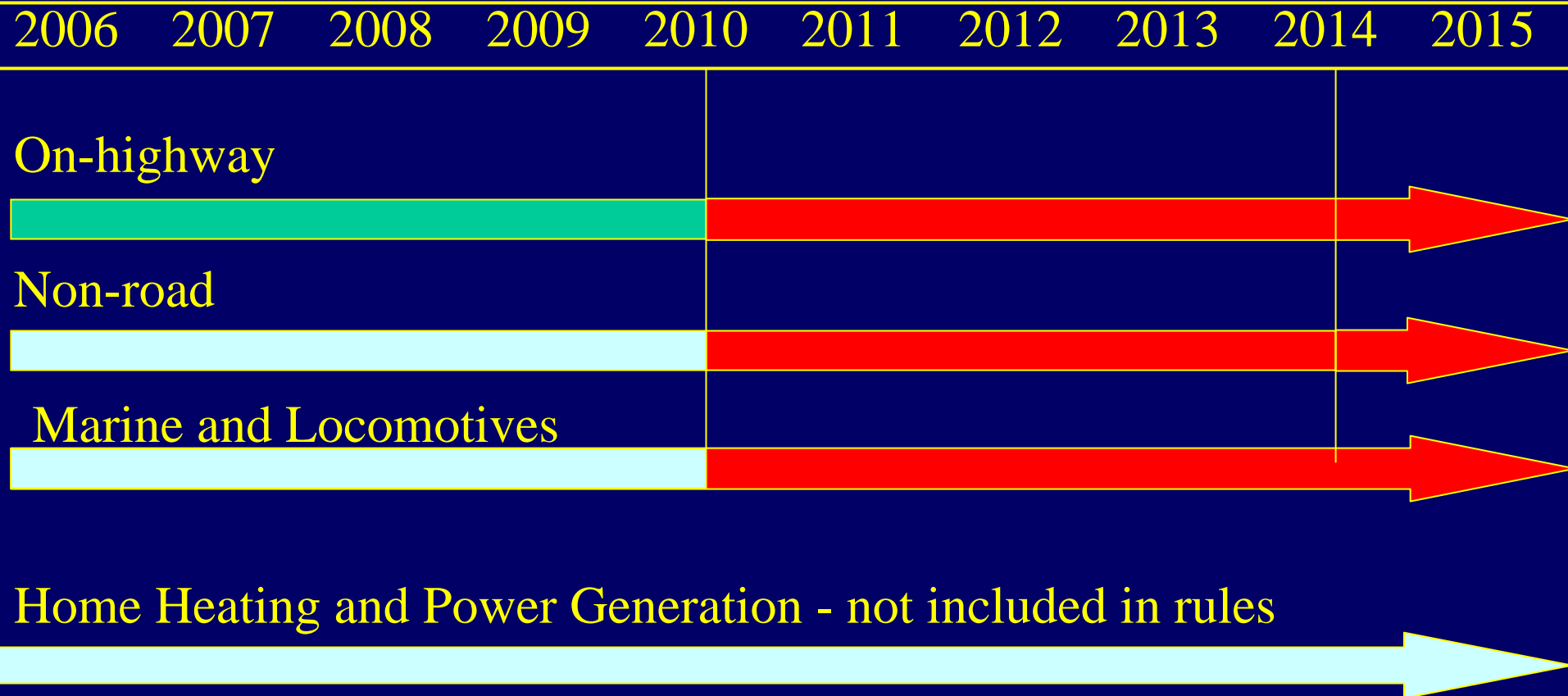
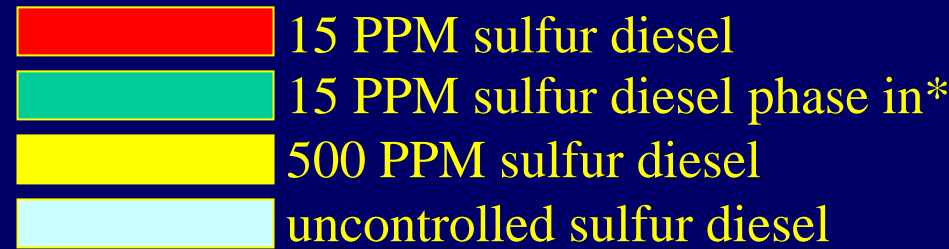


*Subject to phase in, small refiner and hardship provisions

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

History: The EPA Rules

Timelines – Alaska's
recommendations for rural AK
Dates



*Subject to phase in, small refiner and hardship provisions

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Alaska's Recommendations

EPA has not yet adopted or declined the State
recommendations

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

Communities Visited – 2001 to 2003

Fort Yukon

Kotzebue

Unalakleet

Nome

Barrow

Kodiak

Unalaska

Bethel

Chefornak

Dillingham

Conferences Attended and Presented – 2001 to 2003

BIA Provider's Conference

Retailer Association Meeting

Forum for the Environment

Kawerak Infrastructure Meeting

Rural Energy Conference

Alaska Transit Conference

BIA Provider's Conference

Alaska Tribal Environmental Management Conference

ONC/AVCP 2nd Regional Environmental Conference

PNWIS/AWMA Annual Conference

Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan



Alaska Ultra-Low Sulfur Diesel Fuel Transition Plan

To Provide Comments or Get More Information Contact:

Ron King

Alaska Department of Environmental Conservation
Air Non-Point & Mobile Sources Program
410 Willoughby Avenue, Suite 303
Juneau, AK 99801

phone: 907-465-5100

fax: 907-465-5129

email: ron_king@dec.state.ak.us