Ethanol Transloading

City of Alexandria
Presentation to City Council
May 27, 2008
Site Overview
Site Map

Ethanol Transloading Presentation—May 27, 2008
Facility Characteristics

• Transloading track capacity
  – 20 tankcars (additional cars on storage track)
  – ~29,000 gallons ethanol per tankcar
• Spill containment area
  – ~515,282 gallon capacity
• Four fire hydrants
• Security fencing
• Knox Box rapid entry key system for emergency vehicle access
Facility Characteristics

- Installed grounding/bonding equipment
- Climate-controlled storage shed on-site with 1,600 gallons of Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF)
- Facility meets all requirements of Statewide Fire Prevention Code
**Ethanol Characteristics**

- Most commonly produced from corn in the United States
- Polar solvent
- Water soluble
- Flashpoint is -50 deg. F for E95
- Heavier than air (1.59 vapor density)
- Lighter than water (0.79 specific gravity)

Sources: Ethanol Emergency Response Coalition, 2008
Marathon Petroleum Institute, 2008

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Ethanol Characteristics

• Wide flammable range
  – 3.3% to 19% in air (NIOSH, 2008)

• Denatured with ~5% gasoline for transport (E95)

• Blended with gasoline and used as motor fuel (E85)

• Greatest hazard is flammability
  – Little or no smoke/flame produced in a fire
Emergency Scenarios

- Leak
- Spill
- Fire
Response Capability

- Foam firefighting trailer
  - 660 gallons AR-AFFF concentrate onboard
  - 1,000 gallon per minute (gpm) nozzle
- Tow vehicle
- Leak/spill equipment
  - Absorbents
  - Collection pools
  - Recovery drums
  - Atmospheric monitors
  - Recovery pump
Response Capability

• Additional AR-AFFF delivery equipment:
  – Four in-line foam eductors (150 gpm flow)
  – Four air-aspirating foam nozzles
Response Capability

• **Hazardous Materials Response Team**
  – AFD, in partnership with Arlington County Fire Department (ACFD) and the Virginia Department of Emergency Management (VDEM), hosts the Northern Virginia Regional Hazmat Team
  – Minimum of three AFD hazmat technicians on-duty 24/7/365
Response Capability

• Hazardous Materials Response Team
  – Hazmat 202
    • Personal Protective Equipment
    • Computers and research
    • Leak control/containment
    • Spill recovery
    • Atmospheric monitoring
  – Support 202
Emergency Planning

- Emergency management planning will be completed as part of the City’s Comprehensive Emergency Management Plan (CEMP) development.
- Homeland Security Threat Assessment is being conducted by AFD and APD.