

NOCO ENERGY CORP.

NOCO Energy Corp.
700 Grand Island Boulevard
Tonawanda, NY 14150

Who is NOCO?

- Regional fuel supplier in Tonawanda, NY
- Own and operate a 44 million gallon fuel terminal
- Receive product by ship, rail, pipeline or truck
- Store/Market:
 - #6 Fuel Oil Used Oil Fuel
 - Low Sulfur Diesel # 2 Fuel Oil
 - Kerosene Jet Fuel
 - Asphalt Gasoline
 - Biodiesel

Biodiesel NYSERDA Project

- NOCO began exploring biodiesel in Spring of 2002.
- Partnered with NYSERDA on Biodiesel demonstration project
- Project ran from July 2002 through October 2004
- Objectives were:
 - Setup terminal infrastructure
 - Demonstrate operability

Terminal Resources

- Three Areas needed to be addressed:
 - Offloading/receipt of product
 - Storage
 - Loading of B20 biodiesel blend

Terminal Resources

- Receipt of product
 - Received B100 by rail and truck
 - Ability to heat railcars
 - Enables us to unload railcars/trucks during the winter
 - Unload railcars/trucks with a positive displacement pump

Terminal Resources

- Tanks
 - 5-10,000 gallon horizontal tanks
 - Set up of 4 receiving and 1 marketing tank
 - Changes
 - Tanks cleaned
 - Added 2 immersion heaters
 - Glass site gauges

Terminal Resources

- Loading Rack Modifications
 - Dedicated loading arm for B100
 - Product compatible meter installed
 - Outside piping was insulated and heat traced

Loading/Blending

- 2 separate racks-1 for diesel; 1 for biodiesel
- Load diesel portion first; splash blend with biodiesel portion
- Sampled after loading to confirm complete blending

Quality Assurance

- Goals of NOCO's QA/QC Program:
 - Ensure receipt of on-spec product
 - Monitor product blends and specifications
 - Determine proper seasonal blends for customers to ensure winter operability

Quality Assurance

- Receiving
 - B100 received with Certificate of Analysis from supplier
 - B100 meets specifications set in ASTM D 6751
 - Railcar/trucks sampled top, middle, and bottom
 - Composite sample tested
 - Specifications tested
 - Testing completed prior to unloading

Quality Assurance

- Storage
 - All terminal tanks sampled/tested weekly
 - Same testing as receipt samples
- Blending
 - #1 and #2 diesel
 - Samples tested weekly
 - Same standard testing as B100 fuel
 - Also tested Cold Filter Plugging Point (CFPP) and Calculated Cetane Index

Quality Assurance

– B20 Blend

- Blended with low sulfur diesel, kerosene and additives.
- Meet winter operability requirements of customers
- CFPP and pour point tested on winter blends

Biodiesel NYSERDA Project

- Biodiesel B20 Fuel was supplied to:
 - NOCO's Fleet- over 40 tractors and tank wagon delivery trucks.
 - Town of Tonawanda
 - 16 town school buses
 - 12 highway/sewer department vehicles
 - Local Municipal Bus Fleet
 - 35 public transit buses

Biodiesel NYSERDA Project

- Over the period of the project:
 - 490,000 gallons of B20 Biodiesel blend consumed.
 - Over 3,000,000 miles driven

Future Considerations/Lessons Learned

- Potential Future Terminal Modifications
 - Heat trace, insulate and pipe 500,000 gallon storage tank.
 - In-line blending
 - Capable of blending 1 % – 20 % biodiesel B100
 - Expand Laboratory capacities to run complete specifications for B100 outlined in ASTM D6751

Contact Information

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