

RECENT DIESEL EMISSION MITIGATION ACTIVITIES OF THE U.S. MARITIME ADMINISTRATION ENERGY TECHNOLOGIES PROGRAM

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ABSTRACT

The Santa Barbara County (California) Air Pollution Control District is forecasting that NO_x pollutants generated by coastal ships are on the way to eclipsing all land-based county sources. The Port of New York and New Jersey is developing an innovative strategy whereby emissions reduced from the renowned Staten Island ferries could be used to legally offset other sources within the harbor. What technologies can be applied to vessels (which are often foreign owned) to reduce criteria pollutants? What marine unique challenges will have to be accommodated by an emissions-measurement protocol to support the concept of "offsetting" and other technology incentive programs?

At the DEER 2002 Conference, the author gave a presentation providing an overview of the Maritime Administration (MARAD) Energy Technologies Program. The presentation highlighted air-pollution mitigation pressures currently being applied to diesel

engines in the maritime industry and program steps taken to address these pressures. This year's presentation will provide an update of the program and respond to the above questions by examining four subject areas:

- Brief review of program, goals, progress, and new regulations.
- Emissions measurement and performance results from ultra-low sulfur diesel fuel and inlet air humidification technology tests aboard a San Diego based ferry.
- Discussion of marine unique emission measurement challenges presented by ships and the maritime environment.
- Developments in a large vessel engine retrofit technology demonstration project.