

Agenda Date: August 21, 2008  
Agenda Placement: Regular  
Estimated Time: 10 minutes  
Continued Item: No

## Board Agenda Item

TO: Air Pollution Control District Board

FROM: Terry Dressler, Air Pollution Control Officer

CONTACT: Ron Tan, Planning and Technology Supervisor (961-8812)

SUBJECT: Update on Status of Marine Vessel Emission Reduction Efforts

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### RECOMMENDATION:

Receive an update on the status of marine vessel emission reduction efforts.

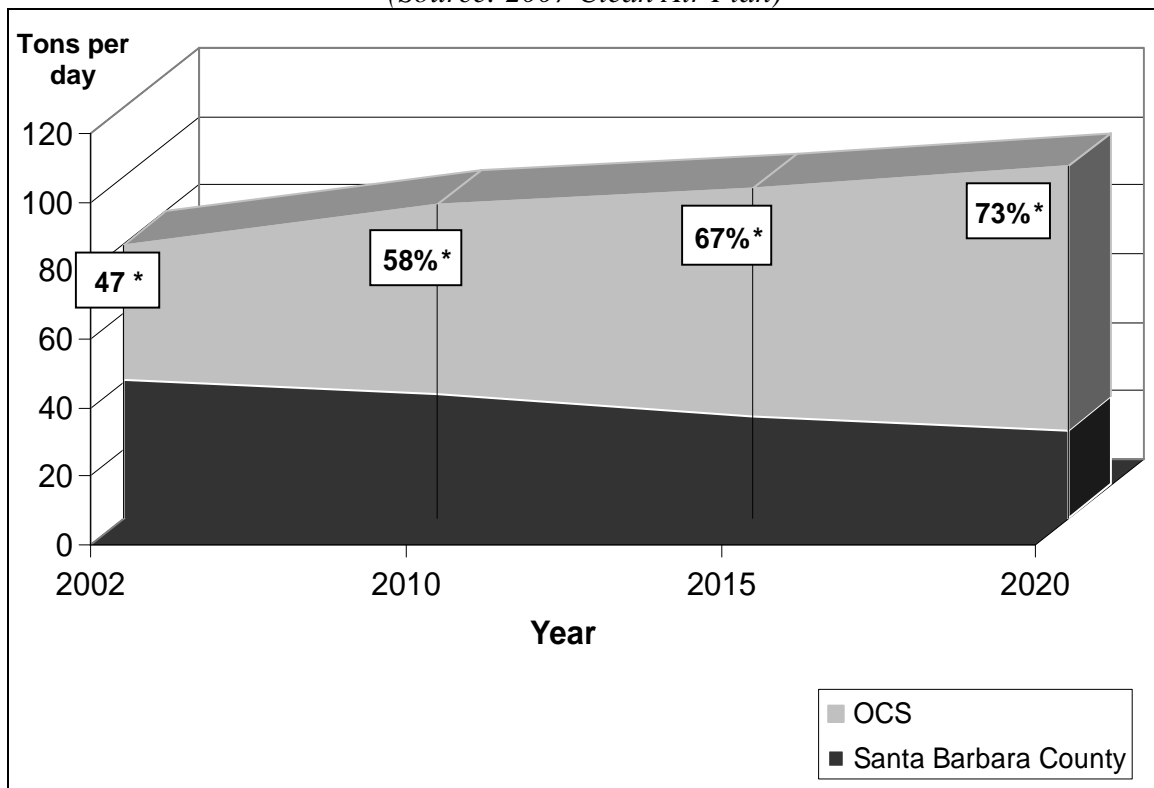
### DISCUSSION:

#### *Marine Shipping*

Santa Barbara County has 130 miles of coastline that are heavily traveled (about 19 transits per day in 2005) by ocean-going vessels mostly heading to or from the ports of Long Beach, Los Angeles and Hueneme. Given the location of the Santa Barbara Channel Islands, large ships are often traveling and emitting pollutants along the North and South bound shipping lanes just ten to fifteen miles off our coastline. A majority of these ships are foreign flagged, are powered by engines large enough to be considered power plants, burn the dirtiest fuel available, and are virtually unregulated in terms of their air pollution emissions.

According to the detailed emissions inventory developed for APCD's 2007 Clean Air Plan, large ships going through the Santa Barbara Channel currently produced close to one-half of the oxides of nitrogen (NO<sub>x</sub>) emissions in Santa Barbara County, which is more than all of the on-road NO<sub>x</sub> emissions from cars, trucks and buses combined (See Figure 1). Due to increasing cargo volumes these emissions are projected to make up close to three-quarters of the NO<sub>x</sub> emissions in the County by 2020. While some of the air pollution from ships is diluted before it reaches shore, the magnitude of these emissions is of concern for onshore air quality and could threaten our ability to attain and maintain the ambient air quality health standards.

**Figure 1: Santa Barbara County and OCS NO<sub>x</sub> emissions forecast including marine vessels**  
 (Source: 2007 Clean Air Plan)



\* Percentage of total NO<sub>x</sub> emissions from Other Mobile Sources – Foreign and US Ships-in transit.

### ***Marine Shipping Board Actions***

The 2001, 2004 and 2007 Clean Air Plans identify marine shipping as a significant contributor to our existing emissions and as an emission source that is anticipated to grow substantially in future years. Your Board has directed the Control Officer to “take aggressive actions to influence the United States Environmental Protection Agency (U.S. EPA) to reduce the air quality impacts of emissions from marine shipping.” (APCD Board Resolution 01-10). In an update to your Board in April 2002, staff discussed the fact that much of the effort to reduce emissions from marine shipping is focused on new ships and emissions at ports. Therefore, staff presented a plan for the Board’s consideration to encourage emission reductions from the existing fleet by making District grant money available for ship retrofit programs. On January 16, 2003, the Board authorized the Chair to send a letter to U.S. Senate Foreign Relations Committee urging ratification of Annex VI, Regulation for Prevention of Pollution From Ships. In October 2003, your Board received another update on marine shipping activities and approved District grant funds for a Marine Shipping Retrofit Project (MSRP), using up to \$100,000 in Innovative Technology Group Funds.

On August 17, 2006, your Board received updates on the MSRP and ocean-going vessel emissions in Santa Barbara County waters. At that meeting, your Board approved the APCD’s role in the project as recipient and distributor of funds for the emissions testing by authorizing the Air Pollution Control Officer (Control Officer) to execute a Memorandum of Agreement between the contributing agencies. On October 19, 2006 your Board authorized the Control

Officer to execute agreements for the in-use emission testing of an ocean-going vessel retrofitted with emissions control technologies using partner contributions and up to \$22,500 of APCD Innovative Technology Group funds.

On March 15, 2007 your Board adopted a policy in support of all reasonable and necessary APCD programs and efforts necessary to reduce and mitigate ocean-going vessel emissions within California coastal waters adjacent to the County and directed the Control Officer to take the necessary actions in support of this policy. The necessary actions include, but are not limited to, the development and proposal of mitigating legislation and support for the strictest possible marine engine emissions standards and control measures at the state, federal and international level.

Finally, in December 2007 and January 2008 your Board directed the APCD Counsel to file Citizen Suits against EPA for its failure to adopt standards regulating air pollution from Category 3 marine vessels as required by Section 213 of the Clean Air Act and 40 CFR §98.4(a)(2)(ii).

### ***Marine Vessel Retrofit Project***

The APCD is participating in a federal, state and local agency effort to demonstrate the feasibility and cost-effectiveness of retrofitting an in-service ocean-going vessel with emission control equipment. The collaborative includes; The U.S. Department of Transportation's Maritime Administration (MARAD), California Air Resources Board (ARB), U.S. Environmental Protection Agency, the ports of Los Angeles and Long Beach, and several air districts. This multi-agency collaboration has been working with the shipping company APL and MAN/B&W, a major marine engine manufacturer, and has retrofitted the vessel APL SINGAPORE with a fuel/ water emulsion system and slide-valves to reduce NOx and particulate matter emissions respectively.

The funding for this project comes from a number of different agencies. In 2005, the APCD supported an application by the Bay Area Air Quality Management District (BAAQMD) for funding from the ARB Multi-district Carl Moyer funding program. The application was successful in securing \$783,628 in grant funds. This Moyer grant funding has covered the purchase and installation of the control technology, allowing the other funds to be used to cover the emissions testing costs. As discussed earlier, in August 2006 your Board authorized the APCD to contribute \$22,500 of Innovative Technology Group trust funds for the source testing costs. Three other agencies have each contributed \$22,500 towards the source testing.

Emissions tests of both of these control technologies were conducted during September and October of 2007. Due to significant and unforeseen technical challenges associated with the prototype fuel/water emulsion system and the slide valves, it was not possible to accurately determine the emission reductions. These technical problems have been resolved and additional emissions testing is planned for Fall, 2008.

### ***H.R 802***

H.R. 802 ("Marine Pollution Prevention Act of 2007"), is a bill to adopt into law the provisions of an International Maritime Organization treaty on air emissions from marine vessels known as Annex VI. The amendments would reduce the allowable amount of sulfur in fuel used by marine vessels and limit NOx emissions from newly constructed vessels. The House of Representatives

and Senate passed H.R. 802 on March 26, 2007 and June 25, 2008, respectively/ The President signed the bill on July 21, 2008.

H.R. 802 would have a minor impact to improving our air quality as it would reduce NOx emissions from newly constructed marine vessels by approximately 5 – 6%.

### ***Senate Bill 1499***

Senate Bill 1499 (“Marine Vessel Emissions Reduction Act of 2007”), sponsored by Senator Barbara Boxer, would amend the federal Clean Air Act to require EPA to promulgate regulations that, effective on December 31, 2010, would require specific marine vessels to use fuel that contains no more than 0.1% sulfur in their main and auxiliary engines. The bill would also require EPA to establish by no later than December 15, 2008, and periodically revise emission standards for NOx, particulate matter, hydrocarbons and carbon monoxide from new manufactured and in-use main and auxiliary engines in ocean going vessels that either enter or leave a U.S. port. These standards would come into effect on January 1, 2012 and would reflect the greatest degree of emission reductions achievable through the application of available technology.

As of May 21, 2008, Senate Bill 1499 has been referred to the Senate Environment and Public Works Committee.

### ***California Air Resources Board Ocean-Going Vessel Regulations***

On January 1, 2007, the California Air Resources Board (ARB) began enforcing state regulations to limit NOx, SOx and particulate matter emissions from auxiliary diesel engines on ocean going vessels within 24 miles of California’s coast. Vessel operators could comply by using a specified fuel, through alternative emission control technologies, or by paying a non-compliance fee in certain circumstances. Ruling on a suit brought by the Pacific Merchant Shipping Association a federal district court ruled that the regulations constituted emission limits and thus were preempted by the federal Clean Air Act unless ARB obtained a waiver from US EPA. Upon appeal by ARB, the Ninth Circuit Court on February 27, 2008 upheld the lower court ruling and reinstated the injunction against enforcement of these regulations.

ARB has amended the regulations and is asserting that as amended, they are not emission limits but rather “in-use” fuel limits which do not require a federal waiver. The ARB adopted these amended regulations at its July 24, 2008 meeting.

### ***Santa Barbara County APCD Lawsuit***

The APCD is a party in two lawsuits challenging US EPA’s failure to adopt standards for the control of air pollution from Category 3 marine vessel diesel engines pursuant to Section 213 of the federal Clean Air Act.

The first lawsuit was filed in District Court for the District of Columbia and charged that EPA had failed to take “final action” to adopt standards for Category 3 marine vessels by the April 23, 2007 deadline. The APCD’s suit was consolidated with similar suits filed by the South Coast Air Quality Management District and the Friends of the Earth. EPA’s defense has been to claim that it did take final action when it adopted a rule extending its deadline to December 17, 2009

(“Deferral Rule”). EPA argues the Deferral Rule renders this suit moot and therefore must be dismissed. Oral argument was heard on EPA’s motion to dismiss by Judge Collier on April 2, 2008. In light of the Court of Appeal proceedings (see below), however, Judge Collier issued a Stay Order on July 31<sup>st</sup>, stating that regardless of what decision she might reach on this case, the ultimate decision was up to the Court of Appeal.

The same 3 parties also have filed individual lawsuits in the Court of Appeals for the District of Columbia. These suits had to be filed no later than January 31, 2008 because the statute of limitations would have otherwise barred any challenge to the Deferral Rule. The three suits were consolidated by the Court of Appeal and have run parallel to the District Court action. This case challenges EPA’s adoption of the Deferral Rule as an abuse of discretion by charging the EPA had no authority to give itself more time to meet a deadline set by Congress. This suit also charges that EPA’s decision was not supported by evidence in the record. This case is fully briefed and oral argument on the merits is set for October 17, 2008.