State of California
AIR RESOURCES BOARD

Resolution 11-25

June 23, 2011

Agenda Item No: 11-4-5

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, ocean-going vessels release into the atmosphere substantial amounts of particulate matter (PM), diesel exhaust PM; oxides of nitrogen (NOx) and oxides of sulfur (SOx) (collectively referred to as "emissions");

WHEREAS, ARB has adopted the Regulations on Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline (OGV Clean Fuel Regulations), title 13, California Code of Regulations, section 2299.2, and title 17, California Code of Regulations, section 93118.2, pursuant to its authority set forth in Resolution 08-35, which is incorporated herein;

WHEREAS, the OGV Clean Fuel Regulations require vessel operators to use cleaner low sulfur marine distillate fuels within a 24 nautical mile zone off the California coast referred to as Regulated California Waters;

WHEREAS, the fuel requirements are implemented in two phases with progressively lower sulfur requirements;

WHEREAS, the Phase 1 fuel requirements began implementation on July 1, 2009, and require the use of either marine gas oil (MGO) with a maximum limit of 1.5 percent sulfur or marine diesel oil (MDO) with a maximum sulfur limit of 0.5 percent;

WHEREAS, the Phase 2 fuel requirements will begin implementation on January 1, 2012, and will require the use of either MGO or MDO with a maximum sulfur limit of 0.1 percent;

WHEREAS, the use of cleaner low sulfur marine distillate fuels significantly reduces emissions from OGVs;

WHEREAS, many vessel operators visiting the Ports of Los Angeles and Long Beach have minimized the use of cleaner low sulfur distillate fuel by taking an alternative route outside the established shipping lanes in the Santa Barbara Channel and outside Regulated California Waters;

WHEREAS, the emission reductions from the OGV Clean Fuel Regulations have not been fully realized due to the use of these alternative routes in Southern California;

WHEREAS, the increased use of alternative routes has increased vessel traffic through the United States Navy's Point Mugu Sea Range, creating the potential for disrupting weapons testing and training exercises;

WHEREAS, a small number of vessels have experienced operational challenges when using the cleaner fuels which may, in part, be related to the lower fuel viscosity in conjunction with worn fuel injection pumps;

WHEREAS, in 2010, the International Organization for Standardization (ISO) adopted a new version of the ISO 8217 fuel specifications that include changes to the specifications for marine distillate fuels including a higher minimum fuel viscosity level and a lubricity specification;

WHEREAS, in August 2012, a 1 percent fuel sulfur limit is expected to be implemented by the federal government for OGVs within a newly established Emission Control Area (generally 200 nautical miles offshore of the United States coastline), and this fuel sulfur limit will be reduced to 0.1 percent on January 1, 2015;

WHEREAS, amendments to the OGV Clean Fuel Regulations are being proposed to: (1) expand the regulatory boundary in Southern California; (2) adjust the implementation date for the Phase 2 sulfur fuel limit from 2012 to 2014; and (3) make other minor adjustments to update standards and improve implementation of the regulations;

WHEREAS, we expect the amendments to the OGV Clean Fuel Regulations will remove the economic incentive to use the alternative routes, encouraging vessel operators to return to the use of the established shipping lanes in the Santa Barbara Channel, recapturing emission reductions lost due to the use of alternative routes, and reducing traffic through the United States Navy's Point Mugu Sea Range;

WHEREAS, extending the implementation date of the Phase 2 fuel standard in the OGV Clean Fuel Regulations from 2012 until 2014 will more closely align the fuel standards with the federal requirements within the Emission Control Area (ECA), provide vessel operators more flexibility to find higher viscosity fuels, and provide additional time for fuel suppliers to offer fuels meeting the new ISO 8217 fuel specifications;

WHEREAS, the proposed amendments to the OGV Clean Fuel Regulations should result in greater PM and SOx emission reductions statewide relative to the current rule;

WHEREAS, in developing the proposed amendments over the past year, ARB staff met and worked with affected industry, the United States Navy, the United States Coast Guard, the California Office of Spill Prevention and Response, local air pollution control and air quality management districts (districts), the Ports of Los Angeles and Long Beach, local Harbor Safety Committees, the United States Environmental Protection Agency, environmental groups, and members of the public;

WHEREAS, ARB staff conducted a Maritime Working Group Meeting on April 28, 2010, and two public workshops, on October 12, 2010 and February 17, 2011, to discuss proposed amendments to the regulations;

WHEREAS, for toxic air contaminants that the Board has not specified a threshold exposure level, section 39666 of the Health and Safety Code requires the development of ATCMs designed to reduce emissions of toxic air contaminants from nonvehicular sources to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, considering factors specified in section 39665, unless the Board determines, based on an assessment of risk, that an alternative level of emissions reduction is adequate or necessary to prevent an endangerment of public health;

WHEREAS, the report "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles," adopted by the Board on September 28, 2000, constitutes the report required under Health and Safety Code section 39665;

WHEREAS, the staff report for the proposed amendments to the Ocean-Going Vessel Regulation entitled "Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Proposed Amendments to the Regulations Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline," released on May 4, 2011 (Staff Report), along with the staff report for the original Ocean-Going Vessel Regulation entitled "Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline," released on June 6 , 2008 (2008 Staff Report), further satisfy the requirements of Health and Safety Code section 39665;

WHEREAS, the Staff Report identifies and explains the need to amend the OGV Clean Fuel Regulations and the feasibility of the proposed amendments;

WHEREAS, ARB staff has determined that prior to 2015 the current International Maritime Organization (IMO) and United States Environmental Protection Agency (U.S. EPA) standards do not sufficiently reduce emissions of diesel exhaust PM, PM, and other criteria pollutants and precursors from in-use ocean-going vessels that visit California ports;

WHEREAS, the Staff Report presents staff's proposal and recommendation that the Board adopt the proposed amendments to the OGV Clean Fuel Regulations, as set forth in Appendix A of the Staff Report and Attachment A hereto;

WHEREAS, the Staff Report discusses, to the extent data could reasonably be made available, the factors specified in Health and Safety Code sections 39665(b), 43013, and 43018, including, but not limited to the estimates of emissions; exposure; potential cancer risk associated with the operation of ocean-going vessel engines in Regulated California Waters; feasible control options; potential environmental impacts; and the necessity, cost-effectiveness and technological feasibility of the proposed amendments to the OGV Clean Fuel Regulations;

WHEREAS, in accordance with Health and Safety Code section 39665(c), the Staff Report and relevant comments received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed amendments to the OGV Clean Fuel Regulations;

WHEREAS, the Board has considered the impact of the proposed amendments on the economy of the State and the potential for adverse economic impacts on California business enterprises and individuals;

WHEREAS, the California Environmental Quality Act (CEQA) and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, in consideration of the information in the public record, including the staff report, written comments, and testimony provided at the June 2011 hearing, the Board finds that:

1. Ocean-going vessels continue to be significant contributors of diesel PM, NOx, and SOx emissions, which California must reduce to attain the ozone and PM2.5 National Ambient Air Quality Standards;

2. In accordance with Health and Safety Code section 39667, and based upon the Board's determinations under Health and Safety Code section 39662, the amendments have been designed to achieve the maximum possible reduction in public exposure to toxic air contaminants;

3. The proposed amendments are necessary to lessen the potential for vessels to interfere with operations at the United States Navy's Point Mugu Sea Range, to recapture emission reductions from the regulation, to facilitate a successful transition to very low sulfur fuels, and to incorporate new information;

4. The proposed amended regulation will continue to reduce diesel PM, PM, SOx, and NOx emissions from OGV, providing critical emission reductions needed by the South Coast Air Quality Management District to fulfill the State Implementation Plan obligations and attain the PM2.5 standard in the South Coast Air Basin, and to help fulfill the goals in the Goods Movement Emission Reduction Plan;

5. In accordance with Health and Safety Code section 43013(b), the in-use fuel specifications and other requirements of the proposed amendments are necessary, cost-effective, and technologically feasible for OGV within the time provided for compliance;

6. The economic impacts of the proposed amendments have been analyzed as required by California law; the conclusions and supporting documentation for this analysis are set forth in the Staff Report;

7. The overall cost effectiveness associated with the proposed amended OGV Clean Fuel Regulations is about $16 per pound of diesel PM reduced and compares favorably to other diesel PM regulations the Board has adopted previously, as well as the original regulation;

8. The benefits to human health, public safety, public welfare, and the environment justify the costs of the OGV Clean Fuel Regulations;

9. The reporting requirements of the OGV Clean Fuel Regulations which apply to businesses are necessary for the health, safety, and welfare of the people of the state;

10. No alternatives considered, or alternatives that have otherwise been identified and brought to the attention of ARB, would be more effective carrying out the purpose for which the amendments to the regulations are proposed, or would be as effective and less burdensome to the affected private businesses and public agencies than the proposed amended regulations;

WHEREAS, pursuant to the requirements of CEQA and the Board's regulations under its certified regulatory program, the Board finds that:

1. ARB staff has prepared an environmental analysis for the proposed amendments, which is contained in Chapter IV of the Staff Report;

2. The statewide emissions of PM, NOx and SOx from OGVs will continue to decline as a result of the OGV Clean Fuel Regulations, with or without the proposed amendments, but the anticipated statewide emission benefits will be greater if the proposed amendments are adopted than if the proposed amendments are not adopted;

3. ARB staff has investigated the regional emission reduction impacts of the proposed amendments, and emissions of PM and SOx from OGVs will continue to decline over the next four years and in most regions of the State will be lower than what would be expected without the amendments;

4. In the Bay Area Air Quality Management District in 2012 and 2013, and in the South Coast Air Quality Management District in 2013, emissions will continue to decline with the proposed amendments; however, the emission benefits from the proposed amendments would be less than what would have occurred under the current regulation with no amendments; these forgone emission benefits could be viewed as a significant adverse environmental impact;

5. These potential regional adverse environmental impacts have been significantly lessened because of the economic downturn and its impact on vessel port visits, and the adoption of the ECA; the result is that emissions are much lower than originally anticipated when the current regulation was adopted in 2008;

6. In the 2008 rulemaking for the original regulation, based on a study performed under contract for ARB by Dr. James Corbett and Dr. James Winebrake of Energy and Environmental Research Associates, ARB staff expected that there would be a slight net increase in carbon dioxide (CO2) emissions from the OGV Clean Fuel Regulations, primarily from the refining process for the required cleaner fuel;

7. While the proposed amendments will result in OGVs using slightly more marine distillate fuels relative to what is being used now, this small increase will have a negligible impact on the production of fuel; therefore, the results of the study are still relevant;

8. In the 2008 rulemaking, ARB found that the increase in CO2 emissions would be extremely small compared to global CO2 emissions, and that the regulations were necessary to protect public health by reducing diesel PM and other emissions, and that these considerations overrode any adverse environmental impacts that may occur from the estimated increase in CO2 emissions;

9. The potential adverse impacts due to a slight increase in CO2 emissions have been significantly lessened because of the economic downturn and its impact on vessel port visits, which has resulted in significantly lower CO2 emissions compared to the emissions estimates originally anticipated when the current regulation was adopted in 2008;

10. The potential adverse impacts from the slight increase in CO2 emissions are also counteracted by the many other strategies ARB is implementing to reduce emissions of greenhouse gases as part of ARB's Climate Change Program;

11. Under the proposed amendments, the OGV Clean Fuel Regulations will continue to provide significant health benefits by reducing premature mortality from PM2.5 exposure and localized potential cancer risk from diesel PM. Because the proposed amendments reduce projected emissions to levels below the 2008 adopted regulation, implementation of the proposed amendments will have public health benefits similar to the benefits from the original rule;

12. The proposed amendments are consistent with ARB's environmental justice policy, as the OGV Clean Fuel Regulations will continue to reduce the health risks from diesel exhaust PM in all communities near major California ports and shipping lanes, including those with low-income and minority populations regardless of location;

13. The potential impacts on marine mammal life were analyzed by ARB staff, and the expected increase in vessel traffic through the Santa Barbara Channel could lead to potential adverse impacts on Humpback whales due to a potential increase in vessel strikes and an increase in vessel noise;

14. The proposed amendments will not result in any adverse impacts on aesthetics, land-use/planning, population and housing, transportation, agricultural and forestry resources, cultural resources, hazards and hazardous materials, mineral resources, public services, utility and service systems, geology and soils, hydrology and water quality, or recreation;

15. As described in the Staff Report, the expected benefits of the proposed amendments are the recapture of emission reductions currently lost due to vessel rerouting, and a reduction of vessel traffic through the United States Navy Point Mugu Sea Range;

16. The Executive Officer is the decision maker for the purposes of title 17, California Code of Regulations, section 60007, and no final decision will be made until comments on the environmental analysis are fully considered and addressed by the decision maker.

NOW, THEREFORE, BE IT RESOLVED that the Board directs the Executive Officer to take the following actions:

1. Modify the regulations as specified in Attachment B and make the modified regulatory language, with such other conforming modifications as may be appropriate, available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such further modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

2. Evaluate all comments received during the public comment periods, including comments raising significant environmental issues, and prepare and approve written responses as required by Government Code section 11346.9, Public Resource Code section 21080.5(d)(2)(D), and title 17, California Code of Regulations, section 60007;

3. Determine whether there are feasible alternatives or mitigation measures that could be implemented to reduce or eliminate any potential adverse environmental impacts, while at the same time facilitating a successful transition to the 0.1 percent low sulfur fuels and reducing the potential for vessels to interfere with the United States Navy's operations in the United States Navy Point. Mugu Sea Range;

4. Make findings as required by Public Resources Code section 21081 if the proposed amendments would result in one or more significant adverse environmental effects;

5. Take final action to adopt the proposed regulations set forth in Attachment A, with the modifications specified in Attachment B and any additional conforming modifications that may be appropriate, including any additional modifications that are necessary to ensure that all feasible mitigation measures or feasible alternatives that would substantially reduce any significant adverse environmental impacts have been incorporated into the final action; or return the proposed regulations and findings to the Board for further consideration before taking final action, if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to conduct outreach efforts as soon as possible with the affected industry to ensure that vessel operators are aware of the amended requirements of the regulation.

BE IT FURTHER RESOLVED that the Board directs staff to work closely with the United States Coast Guard and the affected industry to ensure a successful transition to the 0.1 percent sulfur fuel requirement beginning on January 1, 2014, including continuing efforts to monitor, investigate and evaluate fuel-related issues.

BE IT FURTHER RESOLVED that the Board directs the staff to continue to monitor the implementation of the regulation, including any changes in vessel traffic through the United States Navy Point Mugu Sea Range and Santa Barbara Channel, to work with the United States Coast Guard and others on any implementation or operational challenges, and to propose amendments for the Board's consideration when warranted to resolve any implementation issues that may arise.

I hereby certify that the above is a true and correct copy of Resolution 11-25, as adopted by the Air Resources Board.

Mary Alice Morency, Clerk of the Board

Resolution 11-25

July 23, 2011

Identification of Attachment to the Resolution

Attachment A: Proposed Modifications to the Regulation and Airborne Toxic Control Measure for Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline, California Code of Regulations, title 13 section 2299.2 and title 17 section 93118.2, as set forth in Appendix A to the Initial Statement of Reasons, released May 2011.

Attachment B: Staff's Suggested Modifications to the Original Proposal, distributed at the June 23, 2011 Board hearing.