California Environmental Protection Agency

State of California
ENVIRONMENTAL POLICY COUNCIL
Resolution
June 23, 2015

WHEREAS, California Health and Safety Code section 43830.8 provides that the Air Resources Board (ARB) may not adopt any regulation that establishes a specification for motor vehicle fuel unless that regulation, and a multimedia evaluation conducted by affected agencies and coordinated by ARB, are reviewed by the California Environmental Policy Council (Council);

WHEREAS, Public Resources Code section 71017 established the California Environmental Policy Council, consisting of the Secretary of Environmental Protection; the Chairpersons of ARB and State Water Resources Control Board (SWRCB); and the Directors of Office Environmental Health Hazard Assessment (OEHHA), Department of Toxic Substances Control (DTSC), Department of Pesticide Regulation (DPR), and Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board, *see* Public Resources Code section 40400);

WHEREAS, Health and Safety Code section 43830.8(b) specifies that a multimedia evaluation shall include the identification and evaluation of any significant adverse impact on public health or the environment, including air, water, or soil, that may result from the production, use, or disposal of the motor vehicle fuel that may be used to meet ARB's motor vehicle fuel specification;

WHEREAS, Health and Safety Code section 43830.8(c) specifies that the multimedia evaluation shall be based on the best available scientific data, written comments submitted by any interested person, and information collected by ARB in preparation for the rulemaking, and address, at a minimum, an evaluation of the following:

- Emissions of air pollutants, including ozone forming compounds, particulate matter, toxic air contaminants, and greenhouse gases;
- Contamination of surface water, groundwater, and soil; and
- Disposal or use of the byproducts and waste materials from the production of the fuel;

WHEREAS, Health and Safety Code section 43830.8(g) specifies that ARB shall consult with other boards and departments within the California Environmental Protection Agency, the State Department of Public Health (formerly the State Department of Health Services, *see* Health and Safety Code section 20), the State Energy Resources Conservation and Development Commission (Energy Commission), the Department of

Forestry and Fire Protection (CAL FIRE), the Department of Food and Agriculture (CDFA), and other state agencies with responsibility for, or expertise regarding, impacts that could result from the production, use, or disposal of the motor vehicle fuel that may be used to meet the specification;

WHEREAS, Health and Safety Code section 43830.8(d) requires ARB to prepare a written summary of the multimedia evaluation, and submit it for external scientific peer review in accordance with Health and Safety Code section 57004, and to submit its written summary and results of the peer review to the Council;

WHEREAS, Health and Safety Code section 43830.8(e) specifies that if the Council determines that the proposed regulation will cause a significant adverse impact on public health or the environment, or that alternatives exist that would be less adverse, then the Council shall recommend alternative measures that the ARB or other State agencies may take to reduce the adverse impact on public health or the environment;

WHEREAS, Health and Safety Code section 43830.8(f) requires ARB, within 60 days of receiving notification from the Council of a determination of adverse impact, to make revisions to the proposed regulation to avoid or reduce the adverse impact, or the affected agencies are required to take appropriate action that will, to the extent feasible, mitigate the adverse impact so that, on balance, there is no adverse impact on public health or the environment;

WHEREAS, to address the ambient air toxic risk associated with exposure to diesel particulate matter (PM), ARB has adopted the Air Toxics Program, which establishes the process for the identification and control of toxic air contaminants, and includes provisions to make the public aware of significant toxic exposures and provisions for reducing such risks;

WHEREAS, ARB identified diesel PM as a toxic air contaminant with no safe threshold in 1998, and determined that diesel PM accounts for about 70 percent of the toxic risk from all identified toxic air contaminants;

WHEREAS, ARB plans to consider adopting an Alternative Diesel Fuel regulation (ADF regulation, or regulation) that contains a fuel specification and other requirements for biodiesel when used as a transportation fuel, and Council review of the biodiesel multimedia evaluation and the ADF regulation is required before ARB adopts the ADF regulation;

WHEREAS, ARB staff coordinated multimedia evaluations by the affected agencies of both biodiesel and renewable diesel;

WHEREAS, as part of the interagency collaboration through the Multimedia Working Group (MMWG), the ARB, SWRCB, OEHHA, and DTSC staff conducted the multimedia evaluations of both biodiesel and renewable diesel and submitted them for peer review in accordance with Health and Safety Code section 43830.8(d) and Health and Safety Code section 57004: (1) for biodiesel, the review was conducted in two parts, the first part of which was completed in February 2014, with a supplemental review completing the process in April 2015, and (2) for renewable diesel, the review was completed in

February 2015;

WHEREAS, the May 2015 reports entitled "*Staff Report: Multimedia Evaluation of Biodiesel*" (Biodiesel Staff Report) and "*Staff Report: Multimedia Evaluation of Renewable Diesel*" (Renewable Diesel Staff Report) contain the results of the peer reviews required by Health and Safety Code sections 43830.8 and 57004;

WHEREAS, as part of the multimedia evaluations, the MMWG also consulted with the DPR, CalRecycle, the State Department of Public Health, the Energy Commission, CDFA, and CAL FIRE;

WHEREAS, the Council met in a duly noticed public meeting on June 23, 2015, and considered the Biodiesel Staff Report and the Renewable Diesel Staff Report, and the Alternative Diesel Fuel regulation proposed by ARB;

WHEREAS, the Council has also received and considered presentations from members of the MMWG, including ARB, SWRCB, OEHHA, and DTSC, summarizing the benefits and potential impacts of using biodiesel and renewable diesel in California;

WHEREAS, the Council received and considered written comments submitted on June 22, 2015 by Growth Energy and by the Western States Petroleum Association, and also received and considered comments from interested parties at the June 23, 2015 meeting of the Council;

WHEREAS, the Biodiesel Staff Report and Renewable Diesel Staff Report, along with other materials from the multimedia evaluations, have been made available for public comment;

WHEREAS, the multimedia evaluation for biodiesel concluded that:

- Biodiesel use must meet the in-use requirements in the proposed ADF regulation, and those requirements will preclude excess NOx emissions or other higher emissions relative to diesel motor fuel that meets current ARB specifications (CARB diesel) that could result in a significant adverse impact on public health or the environment from potential air quality impacts;

- Given the information provided by the UC researchers, there are minimal additional risks to beneficial uses of California waters posed by biodiesel than those posed by CARB diesel, and SWRCB staff supports the multimedia evaluation of biodiesel that meets the ASTM fuel specifications and the finding of no significant adverse impacts on public health or the environment;

- The substitution of biodiesel for CARB diesel appears to reduce the rate of addition of carbon dioxide to the atmosphere and the amount of PM, benzene, ethyl benzene, and polycyclic aromatic hydrocarbons (PAH) released into the atmosphere;

- A reduction in cancer risk is associated with use of biodiesel, as is a reduction in greenhouse gas emissions, which are themselves associated with myriad environmental and public health impacts; and

- Biodiesel aerobically biodegrades more readily than CARB diesel and preliminary testing of some additized biodiesel demonstrated higher aquatic toxicity for a small subset of tested species, but the results are not conclusive due to uncertainty; in general, biodiesel has no significant difference in vadose zone infiltration rate, and biodiesel's infiltration rate from animal fat appears to be similar to CARB diesel;

WHEREAS, testing results evaluated in the Renewable Diesel Staff Report show that the use of renewable diesel can reduce PM emissions by about 30 percent compared to CARB diesel;

WHEREAS, the multimedia evaluation for renewable diesel concluded that:

- In a relative comparison between CARB diesel and hydrotreated vegetable oil renewable diesel (HVORD), ARB staff concluded that the use of renewable diesel and the resulting air emissions do not pose a significant adverse impact on public health or the environment;

- Given the information provided by the UC researchers, and the similarities of renewable diesel and CARB diesel, there are minimal additional risks to beneficial uses of California waters posed by renewable diesel than that posed by CARB diesel alone; SWRCB staff supports the multimedia evaluation of renewable diesel that meets ASTM D975 and the finding of no significant adverse impacts on public health or the environment;

- PM, benzene, ethyl benzene and toluene in combustion emissions from diesel engines using HVORD are significantly lower than they are in combustion emissions from engines using CARB diesel; CO and NOx emissions are significantly lower in some tests using HVORD fuel; and variability between studies preclude drawing a conclusion as to differences in PAH exhaust output levels and PAH/PM exhaust ratios from engines equipped with a diesel oxidation catalyst (DOC)/particle oxidation catalyst (POC) between the two fuel types;

- Use of renewable diesel fuel produced by hydrotreating fatty acids from vegetable oil may reduce the amount of PM and aromatic organic chemicals that are released into the atmosphere in diesel engine exhaust, and OEHHA scientists do not find any evidence that these potential beneficial impacts are offset by adverse impacts on human health that might result from replacing CARB diesel with HVORD;

- In comparing renewable diesel with CARB diesel, diesel is free of the ester compounds found in fatty acid methyl ester biodiesel, has a lower aromatic hydrocarbon content, and the chemical compositions of renewable diesel are almost identical to that of CARB diesel;

- The relative environmental impact in case of a spill or leak of renewable diesel compared to a spill or leak from CARB diesel depends on the types, concentrations and use specifications of diesel additives used with renewable diesel, as well as the different production processes; and

- Based on the current production, use, transportation, and storage of renewable diesel in California, renewable diesel will not increase the potential negative impacts to human health and the environment;

WHEREAS, the Office of the State Fire Marshal (Office) concluded that:

- Since renewable diesel and biodiesel blends are subject to regulation under the Aboveground Petroleum Storage Act and the federal Spill Prevention, Control, and Countermeasure rule, sufficient controls are currently in place to prevent spills and releases to the environment and that aboveground storage of these fuels therefore poses no additional risk to the environment;

- There are no significant fire and panic safety impacts from renewable diesel, based on information in the renewable diesel multimedia evaluation; and

- There are minimal additional risks to public safety posed by biodiesel than posed by CARB diesel alone, and the Office supports the multimedia evaluation of biodiesel, and also supports the finding of no significant adverse impacts on fire and panic safety for biodiesel, related to the authorities of the Office;

WHEREAS, CalRecycle has stated that based on the multimedia evaluations provided by the MMWG, the agency is currently unaware of any significant adverse public health or environmental impacts from the use of biodiesel and renewable diesel;

WHEREAS, the Department of Pesticide Regulation (DPR) has reviewed the Staff Reports on Biodiesel and Renewable Diesel and found that the fuels are not registered as pesticidal active ingredients in California and are unlikely to be a major inert ingredient in pesticide products and, therefore, DPR is unaware of any adverse public health or environmental impacts that may occur.

WHEREAS, any hazardous substances and hazardous waste used in the production, storage, and transportation of biodiesel or renewable diesel is required to be handled in compliance with applicable California laws and regulations;

WHEREAS, renewable diesel must meet the requirements of CARB diesel fuel regulations under California Code of Regulations, title 13, sections 2281-2285;

WHEREAS, all other applicable local and State laws and regulations, including fuel storage requirements, will remain in effect;

WHEREAS, new fuel formulations and new additives that may be introduced into commerce in the future to comply with the ADF regulation, and were not included within

the scope of these multimedia evaluations, will be reviewed by the MMWG to determine whether further multimedia evaluation is warranted, and if so, to make recommendations regarding any further action by the Council;

WHEREAS, information regarding oxidative stress and inflammation will continue to be monitored by the MMWG and in the event that new information indicates the potential for a significant adverse impact to public health from exposure to biodiesel exhaust resulting from biodiesel use, the use of biodiesel will be reviewed by the MMWG to determine whether further multimedia evaluation is warranted, and if so, to make recommendations regarding any further action by the Council; and

WHEREAS, in the event that any other new information indicates the potential for a significant adverse impact on public health or the environment from biodiesel use, the use of biodiesel will be reviewed by the MMWG to determine whether further multimedia evaluation is warranted, and if so, to make recommendations regarding any further action by the Council;

NOW, THEREFORE BE IT RESOLVED, that after review of the biodiesel multimedia evaluation and the proposed ADF regulation, and based on the best available scientific information and public comments received, the Council determines that the use of biodiesel in California consistent with the proposed ADF regulation will not pose a significant adverse impact on public health or the environment compared to CARB diesel fuel;

BE IT FURTHER RESOLVED, that after review of the renewable diesel multimedia evaluation and the proposed ADF regulation, and based on the best available scientific information and public comments received, the Council determines that the use of renewable diesel in California consistent with the proposed ADF regulation will not pose a significant adverse impact on public health or the environment compared to CARB diesel fuel;

BE IT FURTHER RESOLVED, that based on its determinations of no significant adverse impact from biodiesel and renewable diesel use, the Council does not identify any alternatives that would be less adverse than the use of biodiesel and renewable diesel as contemplated by the proposed ADF regulation; and

BE IT FURTHER RESOLVED, that the MMWG is instructed to continue to monitor issues relating to the use of renewable diesel or biodiesel, including but not limited to the use of new fuel formulations and additives and potential oxidative stress and inflammation impacts of biodiesel, and in the event that any new information indicates the potential for a significant adverse impact to public health or the environment from the use of renewable diesel or biodiesel, the MMWG is directed to determine whether further multimedia evaluation is warranted, and if so, to make recommendations regarding any further action by the Council to protect the public health or the environment.

DATED: 7/14/15

Matthew Rodriquez
Secretary for Environmental Protection