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The purpose of this outline is to inform panelists of staff's initial findings and analysis related to the topic below. The outline below is not evenly developed as some aspects of this chapter are reliant on other analyses. For example, information regarding multimedia, the biorefinery siting guidance document, and the proposed review process for CEQA documents are fairly detailed while the analysis of the environmental impacts of the LCFS thus far are less complete because first staff has to evaluate the status of fuels before we determine if there are any impacts. Staff proposes to use this and similar outlines to develop the white papers/chapters of the review report due to the Board in December 2011. Please review this outline and identify where data are insufficient and what data are necessary to meet the requirements of the regulation review. This outline is meant to be a high-level overview of the topic; more detail will follow in subsequent white papers/chapters.

### IX. Environmental Impacts Analysis

#### A. Introduction

1. Chapter includes topics 9, 10 and 12 specified in the regulation
  - a. Topic 9: An analysis of the public health impacts of the LCFS at the state and local level, including the impacts of local infrastructure or fuel production facilities in place or under development to deliver low carbon fuels, using an ARB approved method of analysis developed in consultation with public health experts from academia and other government agencies
  - b. Topic 10: An assessment of the air quality impacts on California associated with the implementation of the LCFS; whether the use of the fuel in the state will affect progress towards achieving state or federal air quality standards, or results in any significant changes in toxic air contaminant emissions; and recommendations for mitigation to address adverse air quality impacts identified
  - c. Topic 12: Significant economic issues; fuel adequacy, and supply issues; and environmental issues that have arisen
2. Summary of Conclusions  
[This will tie into the questions in the workplan]

#### B. Background on the 2009 Environmental Analysis

1. Review of Work Completed for 2009 Staff Report
  - a. Staff conducted HRA for potential health risk of new biorefineries in CA
  - b. Analyzed potential cancer and non-cancer health impacts (e.g., premature deaths, hospital admissions, asthma, etc.)
  - c. Because of small magnitude of emissions associated with LCFS, the air quality model could not reasonably predict impact on ozone air quality
  - d. Regulation expected to result in no additional adverse impacts from criteria or toxic air pollutants

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- e. Based on data available in 2009, there may be a reduction in MV pollutant emissions from the projected 2020 fleet
  - f. Most emissions in the original study were from additional truck trips due to delivery of feedstocks
  - g. Did not anticipate increase or decrease in emissions from refineries, power plants, corn ethanol facilities above 2010 baseline
  - h. Also investigated the impact of LCFS on other media, such as water and soil.
- C. Tools and Methods for Assessing the Environmental Impacts in 2009 Staff Report
- 1. Introduction
    - a. We used several different approaches to determine public health and air quality impacts in the 2009 staff report.
    - b. ARB routinely performs multimedia analysis on any new fuel used for transportation purposes in CA.
  - 2. Methods used for initial analysis - areas we assessed in the environmental impacts section of the 2009 staff report
    - a. Air quality impacts
    - b. GHG benefits
    - c. Ambient ozone impacts
    - d. Health impacts
    - e. Other Impacts
  - 3. Multimedia
    - a. Background
      - i. investigates potential impacts from new fuels on air and other media
      - ii. required for any new fuel specs, including any new fuels that are created in response to the LCFS
      - iii. Health and Safety Code (H&S) section 43830.8 prohibits the Air Resources Board (ARB) from adopting a regulation establishing a specification for motor vehicle fuel unless the regulation is subject to a multimedia evaluation by the California Environmental Policy Council (EPC).
      - iv. "Multimedia Evaluation" is the identification and evaluation of any significant adverse impact on public health or the environment, including air, water, and soil, that may result from the production, use, or disposal of the motor vehicle fuel that may be used to meet the state board's motor vehicle fuel specifications.<sup>1</sup>
      - v. To oversee the multimedia evaluation process, the California Environmental Protection Agency formed

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<sup>1</sup> H&S §43830.8(b)

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- the multimedia working group (MMWG) that makes recommendations to the EPC regarding the acceptability of new fuel formulations
  - b. Multimedia Evaluation Process
    - i. Proponent completes the evaluation process, which consist of three tiers<sup>2</sup> or levels of complexity depending on the fuel
  - c. Update on Current LCFS Fuels Undergoing Multimedia Evaluation
    - i. Biodiesel
    - ii. Renewable Diesel
    - iii. E-85
- D. New Tools and Methods Developed for LCFS Review Moving Forward
  - 1. Introduction
    - a. In Resolution 09-31, staff was asked to develop a review process for CEQA documents for projects related to the LCFS
    - b. We were also asked to develop a biorefinery siting guidance document for districts to use as a guide when permitting biorefinery facilities.
  - 2. Staff examination of CEQA review documents
    - a. Overview of CEQA process
    - b. Direct permitting process
    - c. ARB participation in CEQA and District Permitting
      - i. We receive CEQA that is filed with State Clearinghouse and district authority to construct projects that require a public comment period
      - ii. We will review all CEQA documents related to biorefinery projects
      - iii. We will provide comments to ensure all applicable orders, rules, and regulations of the districts and ARB are consistent
      - iv. Use Biorefinery Siting Guidance to help develop comments
  - 3. Biorefinery siting guidance document and mitigation efforts
    - a. Introduction
    - b. Report structure
    - c. Using this report
    - d. ARB's role in siting biorefineries
    - e. Development of report
    - f. Evaluation of biorefinery processes and air emissions

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<sup>2</sup> *Guidance Document and Recommendations on the Types of Scientific Information Submitted by Applicants for California Fuels Environmental Multimedia Evaluations, 2008* ("Multimedia Guidance Document")

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- g. Recommendations for stationary source emission limits from biorefineries
  - h. Recommendations for mitigating mobile source emissions from biorefineries
  - i. Considerations for highly impacted communities
  - j. Additional strategies
  - k. Updates to report
- E. Status of fuel use  
[Summary of Chapter V – Supply and Availability – under development – will include status of infrastructure, feedstock production, fuel production, and fuel use]
- F. Environmental Impact Analysis for the 2011 Program Review
  - 1. Any changes in emissions from the 2009 staff report?
  - 2. Any changes in associated air quality?
  - 3. Any changes in GHG benefits?
  - 4. Any changes in associated public health impacts?
- G. Summary and Conclusions