California Environmental Protection Agency

Air Resources Board

Low Carbon Fuel Standard

Crude Oil Screening Workgroup

March 29, 2010

Agenda

- Welcome and introductions
- Background
- Objectives of the workgroup
- Structure of the crude oil screening process
- Criteria to be used in the screening process
  - Primary screening step
  - Secondary screening step
- Specificity used for screening crude oil sources
- Next steps?

Important Definitions

- “included in the 2006 California baseline crude mix” means the crude oil constituted at least 2.0 percent of the 2006 California baseline crude mix, by volume, as shown by California Energy Commission records for 2006.
- “high carbon intensity crude oil” means any crude oil that has a total production and transport carbon intensity value greater than 15 gCO2e/MJ.

Carbon Intensity for CARBOB and Diesel

- Lookup Table carbon intensity values are weighted averages based on the 2006 California baseline crude mix.
- These average CI values are used if crude oil:
  - Is included in the 2006 California baseline mix or
  - Is not a high carbon intensity crude oil
- Crude oil from sources not included in the 2006 California baseline mix must be screened.
- Fuels derived from crude oil sources determined to be high carbon intensity will be assigned a carbon intensity based on the Method 2B process.

Workgroup Objectives

- Develop a recommendation for a screening process to be used to determine the appropriate carbon intensity assigned to fuels derived from crude oil sources which are not “included in the 2006 California baseline crude oil mix”.
- Develop a recommendation for the level of specificity to be used when screening crude oil sources which are not “included in the 2006 California baseline crude oil mix”.

Screening for HCICO

Proposed three step process

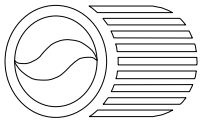
1. Primary screening step: Set of conservative criteria used by regulated parties to identify low carbon intensity crude oil sources.
2. Secondary screening step: Sources not meeting these primary criteria will undergo a more rigorous screening by ARB to identify potential-HCICO sources.
3. Method 2B: Potential-HCICO sources will require a full Method 2B carbon intensity determination.

Primary Screening Step

An example of properties and potential criteria:

- Crude oil with an API gravity greater than 20 and produced by means other than thermally enhanced oil recovery or crude bitumen mining.
- Gas flaring at a rate less than 175 scf/bbl.
- Average reservoir depth less than10,000 ft.
- Produced and/or injected water to oil ratio less than 10 bbl/bbl.
- Produced and/or injected gas to oil ratio less than 2000 scf/bbl.

Failing to meet any one of the criteria would require secondary screening by ARB.



Secondary Screening

- Thermally enhanced crude oil production
- Crude bitumen mining
- Other crude oil sources

Specificity for Screening Crude Sources

- Field specific?
- Crude production method and country of origin?
- Geographic/marketing classification?
- Others?

Next Steps?

- Planning future meetings.
- Contact information for questions and comments:

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