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Submission (oral & written) to the California Environmental Protection Agency
Air Resources Board
April 23-24, 2009
Sacramento, California
Re: LOW CARBON FUEL STANDARD

Good Afternoon.

My name is Christopher Holly. I'm appearing on behalf of the Government of Alberta.

Alberta has been following these and other discussions in North America that are related to carbon management and green-house gas (GHG) policies. We have met and corresponded with California Air Resources Board (CARB) Board members and staff on the proposed California low carbon fuel standard (LCFS), describing the policies we have in place, and offering suggestions that we believe would enhance the California proposal. Alberta appreciates the time that Board members and staff have afforded us, but we feel that many of our concerns have not been addressed.

Nevertheless, why are we here? Alberta is a significant global producer of oil and natural gas. In conjunction with other provinces, Canada is the number one supplier of imported oil and natural gas into the United States. In fact, Alberta currently provides around 25% of California's natural gas demand. We are a sustainable and secure supplier of energy in North American markets.

Turning to the proposed LCFS, my comments today focus on fuel pathway assessments as they relate to the proposed regulation, specifically those related to crudes, and foreseeable issues arising with fairness and equity. There are three points that I wish to bring to your attention:

1. The draft regulation identifies oil sands as a high carbon-intensive crude oil. Information will be presented to you today that shows this description of oil sands is incorrect.

2. CARB is proposing a "California base-line crude mix" based on current crudes consumed in California as the default by giving all such crudes a carbon intensity value of 15g CO2e/MJ. Information will be presented today that shows there are crudes in this basket that are as carbon intensive if not more so than crudes derived from oil sands.

3. One type of oil sands derived crude is synthetic crude oil (SCO). The current treatment of SCO in the draft LCFS fails to recognize the value-added aspect of this crude (which is already partially refined) by assigning it the same carbon intensity value for the refining process as heavier crudes. This leads to potential double counting of carbon.

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In reference to points 1 and 2, the Alberta Energy Research Institute has two third-party studies underway looking at fuel pathway assessments. One of these studies is being conducted by a team from Jacobs Consultancy and Life Cycle Associates. Enclosed are slides from their preliminary report that shows:

- The carbon intensity of oil sands crudes using thermal in-situ production techniques (also known as tertiary production) and from integrated mining operations have no greater carbon intensity than some crudes currently consumed in California, such as Mexican and Venezuelan crudes, and your own indigenous Kern River crude. In fact, once a credit for cogeneration is applied, it is possible that these oil sands crudes have some of the lowest carbon intensities of a basket of crudes that industry, in general, calls conventional.

- I would like to add that not shown on this chart is the carbon intensity of oil sands produced by primary means, which has a carbon intensity similar to so-called conventional primary produced crude.

- Nor does this chart reflect the potential impact on carbon intensity from carbon capture and storage. As some of you may know, Alberta is a global leader in terms of its commitment to and $2 billion investment in, carbon capture and storage.

- The draft LCFS places oil sands crude into this category of high intensity crudes, but at the same time takes a variety of high intensity crudes currently being consumed in California and provides these crudes with a benefit by assigning them the carbon intensity value of 15 g CO2e/MJ. For example, Kern River, a tertiary enhanced oil recovered crude, has a carbon intensity value of 19 g CO2e/MJ, and Venezuelan crude 22 g CO2e/MJ (these are CARB numbers) and yet the regulation singles out and disadvantages oil sands, with a carbon intensity value below these crudes.

- If for example, an oil sands crude has a pathway assessment of 16 g CO2e/MJ, it will, under this draft regulation, be penalized compared to heavier crudes. Yet, it is a "like" crude, which could raise trade concerns.

As a general approach, we have recommended and continue to recommend that each fuel, crude, ethanol based, electric vehicle… be subject to its own individual pathway assessment. However, in practice, there may be benefits for administrative simplicity of having all crude oils assigned one value. Regardless, any LCFS policy must be based on sound science, and be open and transparent.

Why am I focusing on a discussion of crudes?

Crude derived transportation fuels are and will remain the mainstay in California for decades. Based on CARB's projections, crude oil demand in 2020 will be around 80% of today's level. We suggest that what CARB is proposing is a stretch policy, one that is not actually achievable in the time frame proposed. Therefore, the role of crude going forward will not be diminished as envisioned by this LCFS "off-oil" policy, rather its transitional role may be enhanced.

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This is a concern because the regulation provides no recognition, let alone incentive, for process improvements in the upstream crude industry. What the regulation does is expressed in the following excerpt from your report:

> *"... the proposed LCFS regulation will result in a shift of capital from the petroleum sector to the agricultural, chemical, and electricity and natural gas sectors"*

We believe there is a significant opportunity for further improvements in the upstream petroleum industry that will help achieve the overall GHG reduction objectives that we share. Crude oils, including oil from a neighbour and secure supplier of energy to California and the US, should be afforded every opportunity to contribute to your climate change goals, as opposed to being shut out of that opportunity for reasons that have never been made clear and based on data that is incomplete.

Thank you for providing the Government of Alberta the opportunity to comment at these proceedings.

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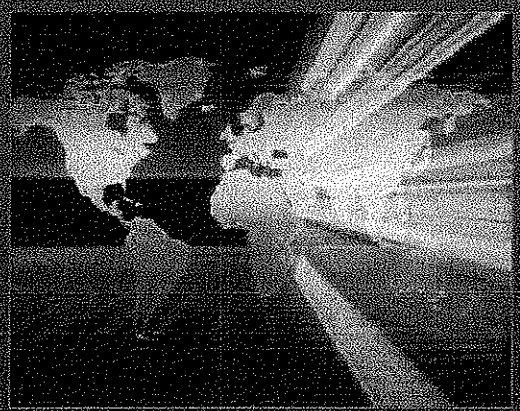
JACOBS™ Consultancy

A Comparison of Life Cycle Carbon Emissions from Conventional and Unconventional Heavy Oils

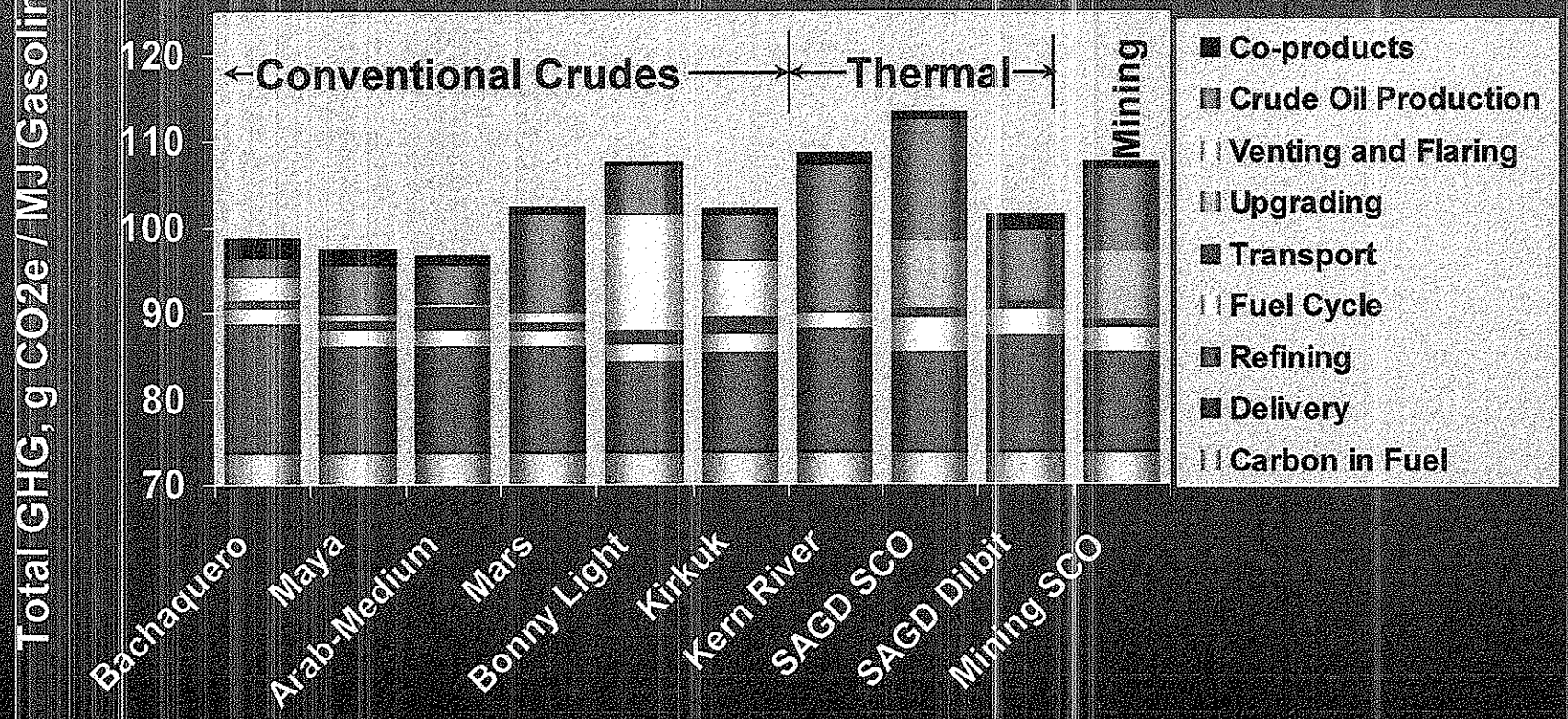
NPRA AM-09-16

William Keesom – Jacobs Consultancy
Stefan Unnasch – Life Cycle Associates
Surindar Singh – Alberta Energy Research Institute
Jon Moretta – Jacobs Consultancy

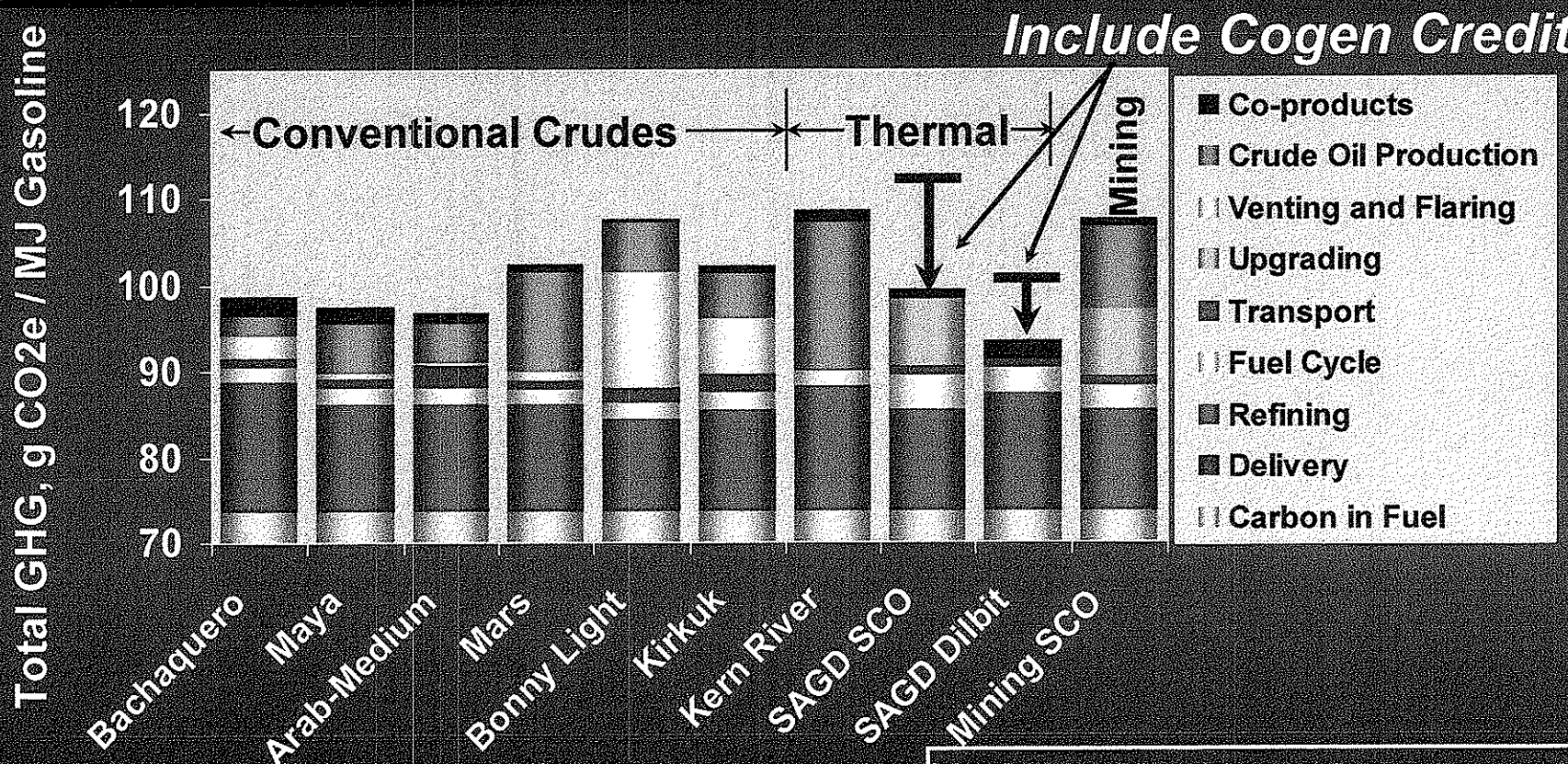


March 23, 2009

Preliminary Life Cycle Results



Preliminary Life Cycle Results



*Cogen credit based on export of natural gas based power that offsets 80% coal based Alberta grid power