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Comments on Low Carbon Fuel Standard Public Workshop to Discuss Potential Regulation Revisions (December 07, 2021)

California Air Resources Board
Low Carbon Fuel Standard Program
1001 I Street
Sacramento, CA 95814

January 7, 2022

Via electronic submittal to: https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=lcfs-wkshp-dec21-ws&comm_period=1

RE: Inclusion of Lower CI Technology

Cheryl Laskowsi,

Thank you for the opportunity to comment early in this important update to the LCFS regulation. The LCFS has proven to be a strong incentive for lower-carbon transportation fuel technologies, and this future rulemaking will provide key investment drivers for the next decade and more.

Sentinel Peak Resources California LLC ("Sentinel Peak") is an independent oil and gas producer with 100% of our operations located within the state of California. Sentinel Peak, in partnership with California Jet Oil LLC ("CJO"), has developed a new and innovative technology to reduce the carbon intensity associated with producing the oil California needs for the foreseeable future, while simultaneously helping the State achieve its ambitious climate emission reduction goals.

We would like to thank CARB for the previous opportunity to present this new technology to the LCFS stakeholder community during last year's LCFS public workshop[1]. We believed then, as now, that this technology is exactly what the Innovative Crude provisions are about—producing transportation fuel with lower carbon intensity values.

CJO's Water-Jet Oil Production Technology provides the potential for California to reduce the carbon intensity of the oil produced and consumed in the State by *replacing* higher carbon intensity crudes

[1] https://ww2.arb.ca.gov/sites/default/files/2020-10/101520presentation_sentinel.pdf

(including foreign imports). Californians will rely on oil for its transportation needs for at least the next 15-25 years[2] and meeting this demand with in-state oil, subject to the most restrictive environmental, health, and safety rules, using innovative low-carbon technology should be a top priority. CARB seems to agree with this assertion as shown on slide 11 of the most recent workshop[3] when discussing "Broad Principles for Policy Concepts". The theme of incorporating 'changes in technologies' is a solid starting point.

The Water-Jet Oil Production Technology that was presented at last year's LCFS workshop is precisely the type of technology being targeted for advancement. Producing crude without thermal resources, while using an ever-increasing green grid is a win-win for the LCFS—this is an electrification of the process, and is consistent with the direction of the LCFS regulation. The technology exceeds the basic threshold to be considered as an innovative crude production method under the Low Carbon Fuel Standard—directly reducing the use of natural gas during production of crude for California consumption. The 'policy' decision has already been made, so Including this technology as an eligible option under the Innovative Crude provisions in the upcoming rulemaking is entirely consistent. Its inclusion is also important to the ability to successfully implement this carbon-reduction technology.

Besides reducing criteria air emissions in one of the nation's dirtiest air basins, Water-Jet Oil Production Technology provides a number of other benefits to California:

- Non-fracking: Water-Jet Oil Production Technology does not fracture the rock formation to produce oil.
- Ground water protection: Water-Jet Oil Production Technology does not inject any water into the surrounding rock formation and all water used in the process is re-used and recycled.
- Reduced surface impacts: Water-Jet Oil Production Technology accelerates the recovery of oil, significantly reducing the well life-cycle from decades to days, allowing the surface to be restored quickly.
- Reduced crude imports: California currently imports 75% of its oil to meet its needs, much of it coming from overseas via oil tanker from countries with little regard for environmental, health and safety, or human rights issues. Water-Jet Oil Production Technology could help California reduce its reliance on imported crude by replacing high carbon intensity imported crudes with low carbon intensity water-jet oil subject to the most stringent environmental, health, and safety rules in the world.
- Increased economic activity: California is currently exporting tens of billions of dollars a year to out-of-state oil suppliers to purchase oil to meet the state's needs. Water-Jet Oil Production Technology provides an alternative to importing foreign crude, while creating jobs and economic prosperity for Californians.

Without the LCFS eligibility updates for Innovative Crude, market conditions will dictate that for the foreseeable future a continuing reliance on existing thermal extraction operations and the importing of higher intensity foreign crudes. We ask the Air Resources Board to include the addition of Water-Jet Oil Production Technology as an eligible innovative crude production method in the upcoming rulemaking.

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[2] CARB PATHWAYS Scenario Modeling, 2022 Scoping Plan Update, Dec 15, 2021: https://ww2.arb.ca.gov/sites/default/files/2021-12/Revised_2022SP_ScenarioAssumptions_15Dec.pdf

[3] https://ww2.arb.ca.gov/sites/default/files/2021-12/LCFS%2012_7%20Workshop%20Presentation.pdf

Furthering California's air emissions goals while reducing our reliance on foreign imports and generating prosperous economic activity here in our state can be accomplished with this new technology.

Given that the full presentation, and earlier staff discussions occurred prior to your new role with the LCFS program, I would like to suggest a meeting to fully discuss this technology. Thank you for continuing the dialogue with us. We look forward to working with CARB staff, LCFS stakeholders to answer questions and see this opportunity become a reality. Please let me know if you have any further questions.

Sincerely,

Marc Whitezell

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