February 19, 2020

Mr. Jim Duffy
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: WSPA Comments on *Red Trail Energy, LLC's Ethanol and CCS Pathway Application*

Dear Mr. Duffy,

Western States Petroleum Association (WSPA) is a trade association that proudly represents companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas, and other energy supplies in California and four other western states. Currently 152,000 men and women have careers in the oil and gas industry in California and 366,000 people have careers whose jobs depend on the industry in this state. The industry in California contributes $152 billion every year in economic activity and directly contributes $21.6 billion in local, state, and federal tax revenue to support schools, roads, public safety and other vital services.

WSPA has long had an interest in the development of carbon capture, utilization, and sequestration (CCUS) technologies and the role they can play in meeting the state's climate goals. We have provided significant comments in the past on the CCUS protocol developed for the state's Low Carbon Fuel Standard (LCFS). We are therefore, pleased to see that the California Air Resources Board (CARB) has posted for comment an application by Red Trail Energy, LLC (RTE) that proposes to use CCUS to reduce the carbon intensity of two of RTE's existing ethanol pathways.

WSPA supports CARB's approval of the application, not for it being presented by any specific company (no WSPA members have any affiliation with RTE), but for the thoughtful approach that CARB is taking toward accepting the use of CCUS as part of its broader climate strategy. While not commenting on the technical merits of the application, we do provide below specific comments on the importance of the emission reductions, the approval of a design-based application, and the concept of geographic neutrality.

Reduction in Carbon Intensity

The application and CARB staff's summary note that with the current production volume of 64 million gallons per year of the RTE starch ethanol pathway facility in Richardton, North Dakota, the expected carbon dioxide production would be approximately 181,000 metric tons of CO_2 annually from starch fermentation. By using a commercially available liquefaction system to capture the high purity CO2 stream (>99%) from the ethanol fermentation tank at a capture efficiency of close to 99% and

transporting the liquefied CO2 to a sequestration and storage site just two miles away, the carbon intensity of the fuel pathway can be reduced by 31 gCO2e/MJ, which represents a gross reduction of 36 gCO23/MJ less 5 gCO2e/MJ related to energy use for the liquefaction system, pipeline transport, and for operating the monitoring equipment and SCADA systems. This represents a very significant reduction in the overall pathway. While not all industrial applications would be expected to achieve such reductions in CI scores using CCUS technologies, the potential reductions across the transportation fuel industry could increase the feasibility of the state's LCFS program and could contribute to meeting the state's climate goals.

Design-Based Application

With RTE having used initial investigations to demonstrate the preliminary technical and economic feasibility of using CCUS at its facility and having its process designs at an advanced stage such that life cycle analyses could be performed, it seems appropriate to allow RTE to submit this design-based application for CARB's approval. CARB provides the opportunity in Section 95488.9(e) to submit such an application for a fully engineered and designed facility without actual operating data. CARB's approval of an application meeting all the regulatory requirements would help encourage innovative companies with CCUS technologies to secure the investment and financing they need to implement their projects. Approval of this application appears to involve a fair development process that gives encouragement to the project developer and provides certainty for business decisions. With the approval of this pathway, CARB would encourage other companies to develop their own CCUS technologies for application in other states or within California so that the final fuels delivered into California will have the lowest CI values possible from each facility.

Geographic Neutrality

While this application is for an ethanol facility that produces a fuel that is used in California, the sequestration and storage of carbon dioxide emissions is through injection into a saline formation in North Dakota. CARB's acceptance of this distinction is important because of the increased compliance opportunity this will add under the LCFS program. Though the emissions reductions are occurring outside California, the lower CI of the fuel would benefit California, once an operational pathway is secured in accordance with LCFS regulatory requirements. Given that climate change is a global problem, allowing transportation fuels for use in California to be produced elsewhere with CCUS technologies reducing their carbon intensity values would allow California to be a champion for innovative technological developments and to continue leading the nation in integrative thinking on climate issues.

Conclusion—Support for CCUS toward Climate Goals

We support CARB's approval of this design-based pathway application by RTE for use of CCUS at an ethanol production facility. We believe that at a high level, policy makers can incentivize the development and deployment of CCUS as a means of reducing GHG emissions from any phase of all transportation fuel industries, be it crude oil production and other upstream activities, midstream, or transportation fuel production (petroleum refining and bio/renewable fuels production). For California to achieve its long-term climate goals, it needs to foster an environment in which CCUS technologies can flourish in multiple types of technical applications.

Thank you for the opportunity to comment. Please feel free to reach out to me at troberts@wspa.org if you have questions or would like to discuss this further.

Sincerely,

Tiffany Roberts
Director, Legislative and Regulatory Policy
Western States Petroleum Association