Euglena Co., CLG and ARA Announce Successful Production of Euglena Based Renewable Jet Fuel

RICHMOND, March 15, 2021 – Euglena Co., Ltd. (Euglena) (HQ: Tokyo, Japan, CEO: Mitsuru Izumo), Chevron Lummus Global (CLG), (HQ: Richmond, California, co-Managing Directors: Bharat Srinivasan and Ujjal Mukherjee), and Applied Research Associates, Inc. (ARA) (HQ: Albuquerque, New Mexico, President & CEO: Robert Sues) are pleased to announce the successful production of renewable jet fuel from a blendstock of microalgae "euglena"-derived lipids, the first in the world to meet ASTM International D7566 Annex 6 standards.

The recently produced renewable jet fuel was examined and certified to meet ASTM D7566 Annex 6 standards by a third-party analysis organization. ASTM standards are the most authoritative international fuel standards for aviation turbines produced from bio-based feedstocks. ASTM, the American Society for Testing and Materials, specify the means and testing methods for a wide variety of industrial materials.

Euglena, CLG, and ARA successfully produced the renewable jet fuel using a blendstock of "euglena" (microalgae-derived lipids) and used cooking oil (UCO) at Euglena's biofuel manufacturing demonstration plant in Yokohama, Japan. The plant utilizes a proprietary Biofuels ISOCONVERSION process, a unique technology for producing renewable fuels compatible with petroleum-based fuels from bio-based feedstocks, jointly developed by Chevron Lummus Global (CLG) and Applied Research Associates (ARA).

The demonstration plant is Japan's first renewable jet and diesel production facility. Upon completing the plant in 2018, Euglena declared their vision of "GREEN OIL JAPAN", aiming to make Japan a leading producer of renewable fuels. Euglena achieved yet another milestone in March 2020 by producing a supply of renewable diesel, and now with the recent jet fuel addition, they are steadily expanding their renewable products to buses, delivery cars, ferries, and tugboats and finalizing arrangements with air transport providers and the Japan Civil Aviation Bureau (JCAB).

In August 2020, Japan's national research organization, the New Energy and Industrial Technology Development Organization (NEDO) selected Euglena's demonstration unit as a public-offering model project to develop and disseminate the microalgae-based jet-fuel production technology and the building of a supply-chain model. Euglena is currently developing a biofuel supply chain with the intent to operate a biofuel manufacturing commercial plant by 2025.



Renewable jet fuel



The demonstration plan

Euglena believes this renewable jet fuel production milestone will be a significant step towards a more circular economy and the first renewable jet fuel flight in 2021.

Sources: "GREEN OIL JAPAN" (https://euglena.jp/news/20181102-2/)

About Euglena
Euglena is the first biotechnology venture company in the world that succeeded in outdoor mass cultivation of the microalgae "euglena" in 2005. They currently operate a Healthcare Business for marketing "euglena" Functional foods/cosmetics and an Energy & Environment Business promoting R&D for biofuel production. In 2014, Euglena started the "Euglena GENKI Program," which provides cookies, rich in nutrients utilizing microalgae "euglena," to Bangladeshi children, and since April 2019 they have expanded this program to all of their products. In December 2012 Euglena was listed on the "Mothers" section of the Tokyo Stock Exchange (TSE), and moved up to the First Section of TSE in April 2014. They define their corporate philosophy as "Sustainability First," and develop their businesses.

About Chevron Lummus Global
Chevron Lummus Global (CLG), a joint venture between Chevron U.S.A. Inc. and Lummus Technology, is a leading process technology licensor for refining hydroprocessing technologies and alternative source fuels, as well as a global leader in catalyst system supply. CLG offers the most complete bottom-of-the-barrel solution for upgrading heavy oil residues. Our research and development experts are continuously seeking advancements in technology and catalysts that will improve operating economics for your next project. For more information, visit www.chevronlummus.com.

About ARA
Applied Research Associates, Inc. (ARA) was founded in 1979, in Albuquerque, New Mexico, to offer science and engineering research to solve problems of national importance. ARA delivers leading-edge products and solutions for national defense, energy, homeland security, aerospace, healthcare, transportation, and manufacturing. With over 1,500 employee-owners at locations in the U.S. and Canada, ARA offers a broad range of technical expertise in defense technologies, civil engineering, computer software and simulation, systems analysis, biomedical engineering, environmental technologies, and blast testing and measurement.