

July 13<sup>th</sup>, 2021

Dr. Phillip McCarthy  
Assistant Professor at the Department of English Language  
American University of Sharjah, Sharjah, UAE



Dear Dr. McCarthy:

Please find attached our report entitled “Fast Lane to a Hydrogen Age.” The purpose of this letter is to fulfill the Engineering Multi-Disciplinary Project (EMDP) requirement for the Eng207 course. In our report, we discuss current hydrogen fuel cell technology in reference to its safety risks, leading us to propose a more advanced storage unit as a solution. More specifically, we have identified and proposed solutions to the problems of costs, risks associated with storing, and limitations of the storage systems of hydrogen fuel cells.

The work presented in this report is based on the collaborative team efforts of our various engineering disciplines. Mohammad Mustafawi, Abdulla Talib, and Mayed Alkait, the Electrical Engineers, were responsible for designing sensors as well as connecting them with other components to have an efficient and safe system. Furthermore, the sensors will be programmed to read the hydrogen levels and detect dangerous readings. Abdulwahab Abdulraheem, the Chemical Engineer, identified the optimal conditions and locations to store hydrogen safely and will be responsible for their installation. Mohammad Tameem Attourah, the Civil Engineer, was responsible for developing the hydrogen containers and ensuring the use of optimal equipment, tools, and pathways to prevent any damage to the hydrogen container.

We would like to express our gratitude to Ms. Beatrice Fuster from Hydrogen International, who has helped us throughout this project with her expertise. Additionally, with the help of AUS librarians, we were able to locate and request important and informative articles. Finally, we are very grateful to Dr. Hugh Mungus for his continued guidance and support on numerous issues related to the chemical field.

We hope that our report meets your requirements and that you consider the manufacture of the proposed hydrogen fuel cell containers to solve the problems currently present in existing hydrogen fuel cell technologies. We thank you for taking the time to read our work and please do not hesitate to contact us if you have any questions.

Yours Sincerely,

A handwritten signature in blue ink that reads "Tameem".

Mohammad Tameem Mahmoud Attourah  
Team Yellow Lambo: Abdulla Talib, Abdulwahab Abdulraheem, Mayed Alkait,  
Mohammad Mustafawi

Encl.: EMDP Report “Fast Lane to a Hydrogen Age”