# G. W. Aru, LLC Announces Receipt of Marathon Petroleum Corporation's Supplier Recognition Award for Extraordinary Performance in Innovative Partnership for Our Great FCC Promoter<sup>TM</sup> and Magcat Textured<sup>TM</sup> SMR Catalyst



Conifer, CO, October 26, 2020 – G. W. Aru, LLC announced today that is has been named a Growth Through Innovation award winner for Extraordinary Performance in the 5th Annual Supplier Recognition Awards, awarded by Marathon Petroleum Corporation (MPC). The Supplier Recognition Awards is a program sponsored by MPC designed to honor suppliers who positively impacted the company's business throughout the previous calendar year.

"I am very honored to receive this award from Marathon Petroleum Corporation on behalf of my team and partners at Magma and UNICAT that made this possible" said Guido Aru, President of G. W. Aru, LLC. "MPC is an outstanding company and our nation's largest petroleum refiner and I am very proud of our partnership with them. MPC has over 15,000 suppliers and contractors and it is very humbling that we are one of only ten chosen for awards this year. Our motto is 'Integrity · Innovation · Value' and we will not rest on our laurels as we continue delivering on all three for MPC and our other customer-partners."

As described in the award citation, our products are making a real difference for Marathon, especially during the challenging times of this pandemic. Our products are also being adopted by many other refiners and petrochemical producers globally. Our FCC additives, like Great FCC Promoter<sup>TM</sup> (GFP®), are helping refiners reduce emissions of NOx and SOx and optimize FCC yields more cost effectively. Our partnership with Magma is enabling refiners, steel manufacturers and soon ammonia and other petrochemical producers to make more hydrogen more efficiently with less CO<sub>2</sub> emissions through their innovative and patent pending Magcat Textured<sup>TM</sup> Steam Methane Reforming (SMR) and other process catalyst technologies. These are inspiring innovations that will enhance our environment and lives.

Our partnership with UNICAT was also critical to reduce the risks for Marathon and other earlier adopters of the Magma catalyst technology. UNICAT has a twenty-year history for quality and performance providing SMR and other process catalysts along with top-tier purification adsorbents to the refining and petrochemical industries. By providing UNICAT's proven conventional SMR catalysts on site for these first adopters of MagCat Textured<sup>TM</sup> catalyst, the risks of any potential failure were completely mitigated. The backup catalysts were never required and the four initial Steam Methane Reforming Units loading Magma have all been running exceptionally for over one year now.

Please contact Guido Aru at <u>Guido.Aru@GWAru</u> and/or see our website at <u>www.gwaru.com</u> for more information.





#### G. W. Aru, LLC

### Integrity · Innovation · Value





Marathon Petroleum Corporation
Supplier Recognition Award
Citation to G. W. Aru, LLC for
Extraordinary Performance in
Innovative Partnership

Marathon Petroleum Corporation Supply Chain is proud to award the fifth annual Supplier Recognition Awards (SRA) to recognize our suppliers for outstanding performance. It is our pleasure to present awards to suppliers who demonstrated extraordinary performance as a business partner.

#### **Innovative Partnership**

By harnessing the power of technology, challenging ourselves to improve, and committing to innovation, MPC sits firmly on the leading edge, adapting to changes in the market, anticipating trends and continuing to meet our customers' evolving needs with high-value solutions.

The supplier awarded the "Growth through innovation" SRA award partnered with MPC in 2019 to create and capture new business opportunities through innovative solutions and improved processes.

MPC is honored to recognize G. W. Aru, LLC as the winner of the Innovative Partnership award. G. W. Aru, LLC is a new company that provides catalyst and catalyst additives for Fluid Catalytic Cracking (FCC) and Hydrogen plants. G. W. Aru, LLC worked closely with MPC to identify new products to add value to the refining system through a novel Low NOx CO Promoter and new shape selective Hydrogen catalyst.

Platinum-based FCC CO promoters were developed in the 1970's to help minimize FCC CO emissions when platinum prices were ~\$100/troy ounce. Palladium-based promoters to meet the EPA's FCC NOx reduction requirements were developed in the early 2000's when palladium prices were ~\$200/troy ounce. Since then, these Platinum Group Metals (PGMs) have increased in cost 5x to 10x. These increased costs of the PGMs have simply been passed on to the refiners; R&D investment for CO promoter technology has been lacking from major FCC catalyst/additive suppliers. G.W. Aru, LLC developed a new. innovative and proprietary (patent pending) technology that enables significantly reduced PGM content while maintaining CO oxidation performance in their FCC CO promoters. Furthermore. G.W. Aru, LLC GFP® (Great FCC Promoter<sup>TM</sup>) promoters have the potential to reduce FCC NOx emissions compared to conventional FCC CO promoters in use today due to their reduced PGM content. MPC was an early adopter of this innovative technology and usage / testing of G. W. Aru, LLC CO promoters is in progress at several MPC refineries with the potential to save >\$0.5MM/yr. as a synergy.

G. W. Aru, LLC also introduced a new Hydrogen plant catalyst called Magma. MPC was the second user of this catalyst at our St. Paul Park refinery and will also utilize this catalyst at our Dickinson Renewable refinery later this year. This catalyst has a novel shape allowing increased surface area to increase the hydrogen production capability of the plant by 5-10 percent.





#### G. W. Aru, LLC

#### Integrity · Innovation · Value

About Marathon Petroleum Corporation: Marathon Petroleum Corporation (MPC) is a leading, integrated, downstream energy company headquartered in Findlay, Ohio. The company operates the nation's largest refining system. MPC's marketing system includes branded locations across the United States, including Marathon brand retail outlets. Speedway LLC, an MPC subsidiary, owns and operates retail convenience stores across the United States. MPC also owns the general partner and majority limited partner interest in MPLX LP, a midstream company that owns and operates gathering, processing, and fractionation assets, as well as crude oil and light product transportation and logistics infrastructure. More information is available at www.marathonpetroleum.com.

About G. W. Aru, LLC: G. W. Aru, LLC is founded on the principles of Integrity, Innovation and Value. We specialize in sales, marketing and technical support services for catalysts, sorbents, chemicals and related technologies and services for the petroleum refining and petrochemical industry. We provide a channel-to-market for our manufacturing partners and we work with them to develop new and innovative products to meet your needs, thus offering you new value-creation opportunities. Our objective is to offer you the best-value solutions through our ability to access a robust portfolio of products and services which our highly experienced team can tailor to meet your unique requirements. Please see <a href="https://www.GWAru.com">www.GWAru.com</a> for more information.

About Magma Ceramics and Catalyst: The company was founded in February 2010, following the management buyout of the former Dyson Precision Ceramics site in the UK. Magma's specialism had previously been focused on the refractory industry. However, the management team also had experience in selling into the catalyst industry through the Dyson division Dytech. This began Magma's journey in developing new catalyst products. The first being an absorbent for H2S capture. Magma then combined their knowledge of ceramics and catalysts to develop a newly designed catalyst for steam methane reforming (SMR) and direct reduction of iron (DRI).

Evolution of the company has been rapid with four acquisitions in ten years, organic growth due to high-quality products and the strategic set up of a factory in Vietnam for more accessible supply into South East Asia and a low-cost manufacturing base. This evolution has led to divisions in Catalysts, Ceramics and Combustion Engineering. It has built upon this solid foundation and continued its strong commitment to investing in Innovation and Research and Development. With such a wide variety of internal skills not only can new products be successfully developed but also bespoke equipment for new manufacturing processes.

Magma has supplied products on six continents in a wide variety of industrial applications such as glass manufacturing, the production of high-quality alloys (superalloy), steel, oil refineries and oil platforms.

Magma is an <u>ISO 9001:2015</u>, <u>ISO 14001:2015</u> and <u>OHSAS 45001:2018</u> accredited company and all their sites adhere to these worldwide standards. Please see <a href="http://magmagroup.com/">http://magmagroup.com/</a> for more information about Magma.

<u>About UNICAT Catalyst Technologies, Inc.</u>: UNICAT Catalyst Technologies, Inc. was formed in January 2000 as an unrivaled company in the field of heterogeneous catalysis. The driving force behind UNICAT's formation were three fundamental principles missing in the traditional larger suppliers in the market:

- Flexibility to meet unique customer requirements quickly
- Dedication to lower costs for industrial users
- Innovation to improve niche catalyst market services ignored by large suppliers

Since 2000, UNICAT have developed over 100 innovative products in niche catalyst markets such as Sulfur Guards, Chloride Removal, Arsine Purification, Mercury Removal, Olefin Purification, Hydrogenation, Hydrogenesing, Bed Grading technology, Polymerization, Sweetening Process, Steel Plant and Synthetic Gas (Hydrogen) while maintaining a cost structure lower than all current competitors in the market.

Please see <a href="http://www.unicatcatalyst.com">http://www.unicatcatalyst.com</a> for more information about UNICAT.





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