

# Testing shows Aina Koa Pono technology not risk to public

By Shawn Kelly

I welcome the opportunity to discuss the workings and overall process of the proposed Aina Koa Pono (AKP) biofuels plant on the Big Island, and believe a healthy debate will assist everyone with understanding the process.

AECOM is program manager under a master services agreement (MSA) with Aina Koa Pono for the Kau project on Hawaii island.

AECOM will also enter into the engineering, procurement and construction (EPC) contract for AKP's project when all necessary approvals are received and a permit to construct is issued pending a mutually agreeable contract ("Critics of Hawaiian Electric's biofuels plan fear high bills," Star-Advertiser, Aug. 11).

Prior to the master agreement, the energy group of AECOM in Oakland, Calif., and Honolulu performed an at-risk assessment of the "microwave depolymeriza-

tion process" technology, which has taken six months and many hundreds of hours to complete.

AECOM has performed a due-diligence effort on the technology. We went to this expense thinking like many of the processes we see that this was another "pie in the sky" technology tweak that had little or no merit.

Before we would proceed with entertaining the EPC aspects, we had to convince ourselves that this new process would work safely, economically, produce a salable product and, most of all, must be a solid opportunity for AECOM.

To the surprise of many, we have reached a very positive conclusion on all metrics required for a suc-

cessful roll-out of an old technology in a new industry — the fuel industry. The trail blazers at AKP have

put much equity into understanding the process from a developer's 100,000-foot prospective. AECOM has dissected the process from many theoretical angles and taken that understanding to the 1,000-foot prospective. The next step is to prove our assumptions by test data, currently in progress, which will bring the level of under-

standing down to the ground and ready for prime time.

Our research has shown that the process is viable, poses no risk to the public or plant personnel, and can be characterized to be as



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safe as your microwave at home.

The process has two phases of operation: the first phase is water removal, which is run at approximately 356 degrees Fahrenheit; the second phase is the "Syn-crude" extraction phase running at about 572 degrees Fahrenheit.

Several weeks ago I visited the facility and witnessed the 5 Ton Per Day (TPD) demonstration unit operate through the first phase of water extraction, which appears to be working within the design parameters. Because the process is linear in nature, the scale-up from the current 5 TPD unit to a 75 or 100 TPD commercial scale unit is relatively simple; the process equipment will be larger and fully tested at the manufacturing facility prior to delivery in Kau.

All testing at this time will be witnessed and certified by AECOM along with the manufacturer engineer of record prior to shipment

— and during the commissioning phase, once constructed, the same rigorous testing will be completed to reach commercial operation in Kau.

As for the "microwave leakage" discussion, the Phase One process at maximum temperature had zero radio-frequency losses, and the same is being reported on the second phase of extracting "Syn-crude." We firmly believe that this will be achieved in the larger commercial units contemplated for use by AKP.

AS LONG AS the demonstration testing continues to perform as expected, as indicated by the information being given to AECOM, our hands-on testing — which should begin in late September — should proceed as expected.

The technology, long-term operations and maintenance should meet the current performance expectations for this most important project.