

DATE: September 17, 2019

TO: Chair and Directors
Solid Waste Advanced Technology Committee

FROM: Russell Dyson
Chief Administrative Officer

RE: **Sustane status update – September 2019**

FILE: 5360-60/WTE

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

Purpose

To provide the Solid Waste Advanced Technology Committee with the current commissioning and operations status, for the advanced technology facility in Chester, Nova Scotia.

Recommendation from the Chief Administrative Officer:

For information only.

Executive Summary

Monitoring of Sustane - Regional district participation

Once full operations begin in Chester, Nova Scotia, both the regional district of Nanaimo and Cowichan Valley have agreed to participate in the monitoring of Sustane Technologies Inc.'s (Sustane) performance. The regional districts will work with our consulting engineer, Morrison Hershfield, as we evaluate the first full year of operations. If as planned Sustane completes their continuous full-time operations by the end of September, our next step will be to work with the two regional districts, and the consulting engineer, to commence our monitoring period.

Sustane's current status

The last update to the Comox Strathcona Waste Management Board indicated that the Sustane facility in Chester Nova Scotia would be operational in June 2019. When the Comox Valley Regional District staff contacted Sustane in July, 2019, the time line was amended to end of August. Sustane explained that a delay of this nature is not uncommon when you are commissioning new technologies. Sustane shared the following video in April, of the first loads being processed - [Video](#).

On April 17, 2019, staff from the Regional District of Nanaimo, the Cowichan Valley Regional District and the Comox Strathcona Waste Management (CSWM), met with Sustane's government relations contact (Kevin Cameron) for an update, and the following information was shared:

- The process has experienced some challenges related to waste containing a higher moisture content in Spain versus experience in Chester (note that the internal memorandum shared with the committee in May, 2019, stated the opposite in error, which was also confirmed in the July update);
- To receive approval for full operations, Sustane is working with Nova Scotia Environment to attain results as projected within the [Environmental Assessment Registration](#). Based on this, the Nova Scotia Environment issued the [Environmental Assessment Approval](#);

- To allow for the production of diesel, gasoline or naphtha, the process must ensure that PVC is not present in the plastic feedstock;
- Separation is achieved through floatation as the specific gravity of PVC is heavier than water and would sink;
- Sustane could not find a local or regional testing laboratory to confirm that the production material meets environmental specifications. A testing lab was sourced in the southern United States to confirm design criteria;
- The process has 14 separate sample points to ensure quality. Regulatory requirement for biomass product has to reach 0.2 per cent plastic content;
- The plant operation was paused until testing specifications were confirmed, restarted at the end of August, to early September;
- Minor modifications were made July and August within the operating plant to improve process while testing results were undertaken.

Staff discussion with Sustane included confirming all possible waste streams that could be processed within the facility - specifically construction and demolition (C&D). Sustane responded that the process is not designed for C&D, although it may be tweaked to accept this material. The CSWM 2017 waste composition estimates that C&D account for approximately 15 per cent (by weight). The 2018 waste to energy analysis information submitted by Sustane did not consider C&D waste streams as feedstock.

The update from September 13, 2019, was that they are on target to be in continual operations by the end September. Also, all non-Sustane construction personnel involved in commissioning the plant are scheduled to be leaving the site the week of September 16, 2019.

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