SOUTHERN TRACE COUNTRY CLUB Shreveport, Louisiana

June 15, 1993

Craig Holden Sustane Natural Fertilizer P.O. Box 19 Cannon Falls, MN 55009

Mr. Holden:

Enclosed is the information on changes in soil CEC levels at STCC after applying Sustane 5-2-4 to our sand based putting greens. Between the dates of 12/8/92 and 4/20/93 we applied:

20 lb. per 1000 ft2 of Suståne 5-2-4 Natural Fertilizer

30 lb. per 1000 ft2 of gypsum, dolomite lime 2.5 lb. per 1000 ft2 N 2 lb. per 1000 ft2 of Scotts STEP 2.5 lb. per 1000 ft2 K (Once 0-0-45)

The results of the soil tests for changes in CEC are enclosed. Please feel free to contact me to discuss any questions you may have with this report.

Thanks, Southern Trace Country Club

Chris Paire Golf Course Superintendent

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Increase In Cation Exchange Capacity (C.E.C.) In High Sand Content Greens Using Sustane Natural Organic Fertilizer Southern Trace Country Club, Shreveport, Louisiana 1992-1993

Chris Paire, Golf Course Superintendent at Southern Trace Country Club applied 20 lb./1000 Sustane 5-2-4 to all greens between 12-8-92 and 4-20-93 for the purpose of providing broad spectrum plant nutrition and increasing cation exchange capacity in high sand content golf greens. Soil test results shown below indicate a 254% increase in C.E.C. between the pre-treatment analyses and the post-treatment analyses.

	soil test 12-2-92	soil test 4-27-93	Increase C.E.C.
C.E.C. (ave. 18 greens)	.96	2.44	254%

Discussion:

Sustane Natural Organic Fertilizer supports increase in total C.E.C. in three ways: First, the addition of stabilized organic matter (humus) to high sand content soils increases cation exchange sites. Second, adjustment of soil pH from slightly alkali to slightly acidic promotes enhanced microbial activity. And third, Sustane provides both microbially active material and food for microbial populations indigenous to the local soils.

Microbial populations and their resultant byproducts are organic in nature. Whatever can be done to increase soil microbial activity should over time help sustain increases in cation exchange capacity.

*Report date: 6-17-93