**Staff Report for 2018 State Board of Equalization**

September 24, 2018  
**File No.:** 2018- Stutsman-Dakota Spirit  
**County or City:** Stutsman County  
**Appellant:** Dakota Spirit Ethanol Plant  
**Issue:** Protests the classification of real versus personal property

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**Summary:** Dakota Spirit Ethanol Plant, represented by the Law Firm Smith Porsborg, protests the assessment on the Dakota Spirit Ethanol Plant complex located within Stutsman County.

**Analysis:** The Dakota Spirit Ethanol Plant is a sixty five million gallon per year ethanol production facility located in Spiritwood, ND. The plant began commercial operations in 2015. For the 2016 tax year, Spiritwood Township retained the services of T.Y. Picket & Co. to perform an appraisal of the facility and determined the value of the facility to be $124,018,990. Midwest Ag Energy disputed this value based on the lack of classification of plant machinery and equipment as personal property. The Spiritwood Township Board of Equalization upheld the Picket value. Stutsman County ordered a new appraisal of the facility and retained the services of Natwick Appraisals. Natwick’s appraisal proposes a value of $19,761,000 after all adjustments for exempt plant machinery and equipment. Stutsman County subsequently placed the structure value of the facility at $84,000,000 to account for the wide discrepancy between contracted appraisals.

A site visit was performed on August 30, 2018. A very thorough explanation of the entire ethanol and dry distiller grains processes was given. The dry mill process, as summarized by the Renewable Fuels Association and displayed in Appendix A, is as follows:

*In dry milling, the entire grain kernel is first ground into “meal, “then slurried with water to form a “mash.” Enzymes are added to the mash to convert starch to sugar. The mash is cooked, then cooled and transferred to fermenters. Yeast is added and the conversion of sugar to alcohol begins. After fermentation, the resulting “beer” is separated from the remaining “stillage.” The ethanol is then distilled and dehydrated, then blended with about 2% denaturant (such as gasoline) to render it undrinkable. It is then ready for shipment. The stillage is sent through a centrifuge that separates the solids from the solubles. These co-products eventually become distiller’s grains, as well as corn distiller’s oil.*

According to the International Association of Assessing Officers’ *Property Assessment Valuation*, the cost approach to value can be based on four concepts of estimating cost: reproduction cost, replacement cost, historical cost, and trended historical cost. Original, or Historical cost, is defined as “the cost of property when it was originally constructed...original cost is an accounting term defined as the acquisition cost of a property (asset) to its present owner, that is, the net price of an asset.” Midwest’s acquisition costs of the facility were requested. From these detailed records, a cost approach was performed using the historical cost. Physical and obsolescence adjustments as calculated by Natwick Appraisals were found to be reasonable and were applied to staff’s cost approach, resulting in a property value of $93,424,000 before adjustments for exempt plant machinery and equipment.

Real property, for the purpose of taxation, includes all structures and buildings, including systems for the heating, air-conditioning, ventilating, sanitation, lighting, and plumbing of such structures and buildings. It does not include items which pertain to the use of such structures and buildings, such as machinery or equipment used for trade or manufacture which are not constructed as an integral part of and are not essential for the support of such structures or buildings, and which are removable without materially limiting or restricting the use of such structures or buildings.
From the asset listing, site visit, and supplemental photographs of the facility (Appendix B) provided by the company, a thorough analysis of the listed property was performed to determine the presence of exempt plant machinery and equipment. Process machinery and equipment removed from the assessment includes, but is not limited to, truck scales, grain transfer equipment, dust control equipment, hammer mills, mixers, agitators, heat exchangers and cooling tower, methanator, centrifuges, dryers, CO2 scrubber, distillation columns, lab equipment, computer software, piping and electrical items associated with non-taxable process machinery and equipment, and small process tanks that are removable without materially limiting or restricting the use of buildings or structures.

Items that remain as taxable real property include buildings, grain bins, ventilation stacks, piping and electrical items directly relating to buildings and taxable structures, improvements to the land, and tanks that are not removable without materially limiting or restricting the use of buildings or structures.

After all adjustments related to exempt plant machinery and equipment to staff’s cost approach, the resulting value of the facility stands at $33,910,000.

**Recommendation:** Reduce the structure value as equalized by the Stutsman County Board of Equalization by 60% to account for plant machinery and equipment exempt as personal property.
Appendix B (Photographs from Natwick Appraisal)

Looking W-SW towards the Dakota Spirit AgEnergy, LLC Ethanol Plant

Looking E-NE towards Admin. Office/Maintenance Building & Truck Scales

Looking W along the S Side of Office/Maintenance Bldg – Truck Scale to the Left

Interior Office Area in Office/Maintenance Building
Looking SW towards DDGS Dryer Building – Cooling Tower to the Left & DD&E (Distillation, Dehydration & Evaporation) Area to the Right

Corn Oil Extraction Equipment in Dryer Building

Interior of Dryer Building – Two of the Three Steam Tube DDGS Dryers

Modified Wet Distiller’s Grains Storage & Loadout Area