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January 6, 2026

RE: Eco Systems, Inc  
Engineer's Opinion of Probable Cost for  
Industrial Sludge Byproduct Disposal Land  
Application  
The Swift Pork Company, Ottumwa, IA  
Wapello, Davis, Keokuk and Jefferson  
Counties, Iowa

Theresa Stiner  
IDNR Land Quality Bureau  
6200 Park Ave  
Suite 200  
Des Moines, Iowa 50321

Dear Ms. Stiner:

The following engineer's estimate is to be used for the basis of financial assurance as required in IAC 567-121.8. The costs detailed below are based on a third-party land application of stored solid waste due to the permit holder's failure to properly land apply wastes in accordance with 567-121.7. We have taken into consideration location, materials and the volume of storage available based on the information provided by Eco Systems.

The Swift Pork Company facility in Ottumwa, Iowa is a hog processing facility. The facility has a substantial wastewater treatment facility consisting of anaerobic treatment and activated sludge treatment. Biosolids from the treatment system are dewatered and land applied for final disposal. It is our understanding that the material stockpile volumes associated with the crop growing season (9 months) is what needs to be considered for developing closure cost estimates. With this in mind, the estimated stockpile volume for the material accumulation is approximately 9,000 tons. Based on the Facility's annual production of approximately 12,000 tons of material, this stockpile represents approximately 75% of the annual amount estimated to be land applied in Iowa.

The disposal area consists of 43 distinct sites in Wapello, Davis, Keokuk and Jefferson Counties

Based on the production volume and the reporting and auditing requirements, it seems unlikely that vast amounts of material could accumulate without intervention. It is reasonable to assume that it is possible for a full growing seasons worth of material stockpile to accumulate. The following opinion of cost is based on the information above, and the notes on the following page:

Engineers | Architects | Planners | Scientists

**Short Elliott Hendrickson Inc.**, 10 N Washington, Suite 110, Mason City, IA 50401  
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### Engineer's Estimate of Probable Cost

<u>Item</u>	<u>Quantity</u>	<u>Cost</u>	<u>Total</u>
Mobilization <sup>1</sup>	1 LS	\$25,000	\$25,000
Material Application <sup>2</sup>	9,000 TON	\$15.50	\$139,500
Management <sup>3</sup>	1 LS	\$15,000	<u>\$15,000</u>
TOTAL			\$179,500

<sup>1</sup> Mobilization includes all costs associated with transportation of equipment, material and workers to multiple sites. Costs also include obtaining land, easements and soil tests necessary for application.

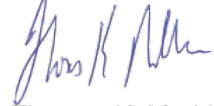
<sup>2</sup> Application includes loading and spreading costs are based on information obtained from previous projects and/or information from land application contractors.

<sup>3</sup> Management includes all reporting requirements.

Please call if you have any questions.


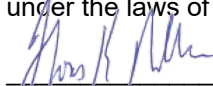
Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Thomas K. Madden, PE  
Project Engineer

cc: Kirbie Grunig, Eco Systems Inc, 14246 Keb Lane, Ottumwa, IA 52501

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.	
		1/6/2026
	Thomas K. Madden, PE	(Date)
	My License renewal date is: December 31, 2026 License Number: P15573 Responsible for the following sections: All sections	