



Date: 01/24/17

COMPANY INFORMATION

Company Name: GEA Houle Inc.	
Phone: 819-477-7444	Web Site: http://www.gea.com/
Address: 4591 Boulevard St-Joseph	City: Drummondville
State: QC, Canada	Zip Code: J2B 6W3

BUSINESS CONTACT

TECHNICAL CONTACT

Name: Jeramy Sanford
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Address: 1880 Country Farm Dr.
City: Naperville
State: IL
Zip Code: 60563

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BUSINESS HISTORY

How long have you been in business? 1957

Are you part of a larger company? Yes No

Did you exist as another company before this company was formed? Yes No

If so, what was that company's name?

J Houle and Fils

Number of employees? 17,000

What is your business structure? Publicly traded corporation

What types of insurance and or surety do you provide?

Long history, positive reputation with the industry, contact company representative for more information.

References. Please provide customers or colleagues with whom we can discuss your business and performance.

Please include a separate list with company name, location, contact name and contact information.

Contact Company Representative

Describe your business service(s). *For example: consulting, development, engineering, equipment sales, finance, other.*

Equipment manufacturing and sales, process engineering

Area or region of operation.

Worldwide

Does your company hold any patents or the rights to any patents? *Please identify.*

Yes, contact company representative

Do you manufacture equipment? Yes No *Please describe.*

Manufacture milking, manure, and livestock housing equipment, food process and packaging.

Do you integrate equipment manufactured by others? Yes No

If you integrate, please list the names of the companies you represent.

Numerous, see company representative

How do you answer potential customer's question about financial strength of your company?

GEA is a publicly traded company and financials are available.

Do you offer technical/service support? Yes No *If so, what methods?*

Call in, field service and web based.

Do you offer design services? Yes No *Please describe.*

CAD drawings and farm layouts on varying platforms

Do you offer financing? Yes No *If so, what terms?*

Are you a full stop shop? *Design to construction to operate?* Yes No *Please describe.*

Do you have preferred partners? Yes No

If so, please list and provide contact information/identify partners by name.

Do you have any third-party verification/research that has been done on this technology? Yes No

If so, please describe.

See company representative

Do you provide a performance guarantee? Yes No

If so, what are you guaranteeing? For example: up time, methane production, biogas production, parasitic load, throughput, O&M cost, percent recovery, other.

We can provide Service contracts and extended warranties, performance based guarantees based on throughput, percent recovery and moisture.

Are there any other aspects of your business that you feel should be included in this document?

GEA is one of the largest suppliers of process technology for the food industry and for a wide range of other industries. In 2016, GEA generated consolidated revenues in excess of about EUR 4.5 billion

INITIAL TECHNOLOGY OVERVIEW

This information is to guide in the development of a more specific and detailed Technology Information Request. Please answer the following questions for each Technology or Service Provided.

What is the name of the technology or service?

Modular XPress, Slope screen, Two stage slope screen, centrifuge, vertical dewaterer, manure pumps and agitators

What unit process is the technology used in?

For example: initial collection/transfer manure storage, energy recovery, primary/coarse solids recovery, advanced suspended/fine solids recovery, drying, struvite production, nitrification denitrification, ammonia stripping, algae, vermi composting, membrane filtration, evaporation, other.

Initial collection/transfer manure storage	Nitrification denitrification
primary/coarse solids recovery	Ammonia stripping
advanced suspended/fine solids recovery	Membrane filtration
Drying	

How many systems have you installed on dairy farms or other livestock operations?

The number of installations is tremendous. GEA has excellent market saturation and provides producers worldwide with solutions.	
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Size of farm(s)?

All sizes of dairy and hog farms use GEA equipment	
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Location of farm(s)?

Worldwide

What's the smallest/largest farm for your system?

< 50 cows >10,000 cows

Input material description/characteristics:

For example: raw manure, digestate, screened digestate, suitable non-farm feedstocks, other.

Raw manure

Digestate

Screened digestate

Suitable non-farm feedstocks

Other

Does the technology treat the full manure stream for a farm or a fraction of the stream?

Both, depends on the farm specific needs

Do you consider this a mature system or ongoing farm development?

The majority of the system is mature, however we constantly strive to develop both on farm and at our facilities.

Any weather constraints? **Yes** **No** *Please describe.*

Cold weather protection, humidity can affect processes as well.

Any bedding constraints? **Yes** **No** *Please describe.*

Sand bedding can reduce operating costs of equipment.

Is this process scalable and to what extent (top and bottom limits)? **Yes** **No** *Please describe.*

Equipment can be used in a wide variety of applications/sequences. There are no equipment limitations on farm size.

Do you have a known scaling factor? **Yes** **No** *Please describe.*

Input and output of your unit/system – do you have a mass balance analysis? Yes No *Please describe.*

We can do a mass balance analysis on the type of treatment system that you prefer.

Do you consider this technology part of a larger system that you provide? Yes No *Please describe.*

Yes, We offer complete milking, manure and barn equipment for Dairy farms.

Has your technology been accepted by the NRCS? Yes No *Please describe.*

Approved manure transfer and treatment technology.

Would you be willing to provide information for a technical review? Yes No

Would you be willing to respond to a Request for Quotation (RFQ) on a generic project for comparison of your technology against other technologies in the same unit process? Yes No

Are there any other facts about this technology that you feel should be included in this document?

Manure and nutrient separation is a constantly developing process. There is no one solution for the needs of today's producers. The reasons and end goals of separation vary and at GEA we strive to develop and work towards meeting the goals of the individual.