



Date: 10/28/2016

**COMPANY INFORMATION**

<b>Company Name:</b>	Regenis		
<b>Phone:</b>	360-366-9900	<b>Web Site:</b>	www.regenis.net
<b>Address:</b>	6920 Salashan Parkway A-102 PO Box 2708	<b>City:</b>	Ferndale
<b>State:</b>	WA	<b>Zip Code:</b>	98248

**BUSINESS CONTACT**

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<b>City:</b>	Ferndale
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**TECHNICAL CONTACT**

<b>Name:</b>	Craig Frear
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<b>City:</b>	Ferndale
<b>State:</b>	WA
<b>Zip Code:</b>	99248

**BUSINESS HISTORY**

**How long have you been in business?** 40 years (Digester business 2000)

**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?*

Andgar Corporation

**Number of employees?** 100+ (Digester business 18)

**What is your business structure?** Corporation

**What types of insurance and or surety do you provide?**

General and professional liability, errors/omissions, payment performance bonds available

**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.*

FPE Renewables Steve VanderHaak 360-410-2002	DeRuyter & Sons Dairy Dan DeRuyter 509-391-0457
AgPower Group Marlin Statema 360-392-8938	Promus Energy Dan Evans 206-624-2144

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

Anaerobic digestion and other wastewater/nutrient cleaning/recovery systems associated with organic waste. Full spectrum services from design, engineering/procurement/construction (EPC), construction management, grant writing, fabrication, technology vendor, and operations/maintenance

**Area or region of operation.**

West Coast US

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

Shares patents on ammonia stripping and other nutrient/biogas scrubbing technologies

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

The larger business (Andgar Corporation) provides manufacturing related to specialty metals, agricultural/processing equipment. Many of these services are/can be utilized in manufacture of components for projects.

**Do you integrate equipment manufactured by others?**  Yes  No

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

We work with numerous vendors to supply a full system to meet client needs.

We work with various digester designs, engine manufacturers, gas scrubbing/cleaning, screens, presses, mixers, choppers, etc.

List is extensive, available on request

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

The larger corporation has been around for over 40 years, providing excellence in construction and operation/maintenance for small to large projects during that time. In that time we have developed an excellent reputation with customers and financial firms/lenders with an excellent degree of financial strength across these years of business.

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

We provide various levels, including full, operation/maintenance on projects, both those we have constructed as well as other projects that have requested our services.

During project development as an partnering EPC contractor we also provide services in design, grant writing, work with permit/regulatory agencies, etc.

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

As EPC contractor we work with project team, providing our years of experience across the industry and other areas, to assist in system design and layout.

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

No

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

Yes, from design, to grant writing, to construction management, to fabrication and ultimately system operations/maintenance.

**Do you have preferred partners?**  **Yes**  **No**

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

We work with a variety of vendors and partners, with a key partner being DVO, Inc. as a licensee and preferred vendor for their technologies. We work with a variety of other vendors as well to best meet customer and project needs.

List is available upon request.

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

*If so, please describe.*

Many of our AD system installations has third party validation of performance via Washington State University while a plethora of data is available from on-line data logging of key operations and performance at multiple sites.

**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.*

Performance guarantees with partnership of vendors is a discussion that can be had on projects. Case by case situations.

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

We welcome the opportunity to discuss further any business or project related questions so that you can determine if a partnership with our company, team and services is a good fit.

**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?**

EPC construction and management on anaerobic digestion and wastewater/nutrient projects with operations/maintenance 

**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.*

We have worked on and provide services related to construction/operation of feeds to digesters, digesters, solids/liquid separation, gas scrubbing/cleaning, gas utilization, engine systems, solids/nutrient recovery and clean water.

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

Since 2004 to this date, we have installed thirteen AD system projects across the West Coast--Washington State, Idaho, Oregon and California. All thirteen have been placed on dairies and utilize dairy manure as well as various degrees of co-digestion with outside substrates.

**Size of farm(s)?**

The installations range in scale from 700 cows to 15,000 cows, treating influent volumes ranging from 50,000 gallons per day to 500,000 gallons per day.

**Location of farm(s)?**

Washington, Idaho, Oregon, and California with projects under development in other various states, primarily West Coast but some across US.

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

The smallest is a 700 cow farm practicing 30% by volume co-digestion for a total daily flow of 50,000 gallons/day while the largest is a dairy manure-only operation involving 15,000 cows and 500,000 gallons/day flow rate. Project range in size between those extremes.

**Input material description/characteristics:**

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

Projects include primarily or dairy manure-only as well as extensive co-digestion with manures, incorporating food processing, agricultural waste, FOG, etc.

We are also open to project involvement in non-manure projects with industry and municipalities.

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

All of our projects for which we served as EPC as well as those where we provide operations/maintenance services treat the full stream on the farm.

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

We have used and continue to use mature technologies but also do some extensive R&D on emerging technologies as well.

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

No

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

We prefer to use digested fibrous solids as bedding and to not use sand bedding, but we have several projects where we have used sand settling lanes to separate out sand.

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

Yes it can be scaled, the practical limits are not based on engineering or construction but on project return and received price for offtakes of the biogas and co-products.

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

We do, although project specific. We can discuss some scaling factors upon request.

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

We have years of experience constructing and operating full anaerobic digestion systems on dairies and other farms. From this years of experience we have an excellent handle on mass/energy balances and flows for design purposes. As well as detailed Pro Forma capabilities based on those mass/energy balances and productivities/costs.

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

We provide systems, in that we provide a system that includes many technologies aimed at meeting farm and project goals, these may include or not include anaerobic digestion, solids/liquid separation, advanced solids separation, various nitrogen recovery technologies, various biogas utilization technologies, and even clean water technologies.

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

We use many technologies from providers that have NRCS approval.

**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?**

We welcome an opportunity to discuss with you any aspects of your project and whether or not we are good fit to being a team member on your project.