



Date: 31st January 2017

**COMPANY INFORMATION**

<b>Company Name:</b>	Sustec BV		
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<b>Address:</b>	Agro Business Park 7a	<b>City:</b>	Wageningen
<b>State:</b>	The Netherlands	<b>Zip Code:</b>	6708 PV

**BUSINESS CONTACT**

**TECHNICAL CONTACT**

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<b>Address:</b>	Agro Business Park 7a	<b>Address:</b>	Agro Business Park 7a
<b>City:</b>	Wageningen	<b>City:</b>	Wageningen
<b>State:</b>	The Netherlands	<b>State:</b>	The Netherlands
<b>Zip Code:</b>	6708 PV	<b>Zip Code:</b>	6708 PV

**BUSINESS HISTORY**

How long have you been in business? 9 years

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?*

Sustec Consulting & Contracting BV

Number of employees? 7

What is your business structure? Private enterprise, family owned

What types of insurance and or surety do you provide?

**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.*

WWTP Venlo, WBL, The Netherlands

WWTP Apeldoorn, Waterboard Vallei & Veluwe, The Netherlands

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

Sustec provides sustainable technologies for a circular economy. With a focus on continuous thermal hydrolysis processes and resource recovery, we offer our customers TurboTec® and NutriTec® installations, supportive consultancy and laboratory services, pilot testing, engineering and operational support.

**Area or region of operation.**

The Netherlands, Europe, North-America and Asia.

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

Yes, two (2) patents.

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

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

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

Heat exchangers, pressure vessels, pumps, valves, drum filter, steam injectors.

Veolia Berkal filters, UF, separators, 3M membranes, pumps, valves.

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

No.

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

Consultancy services, laboratory testing and commissioning.

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

Engineering packages and engineering design of thermal hydrolysis installations. Design of nutrient recovery systems for removal and recovery of N and P.

**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.*

DMT  
DMT CGS  
Willems  
Huisman

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

*If so, please describe.*

**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.*

Operational costs, e.g. steam consumption, for thermal hydrolysis (TurboTec®) and nitrogen recovery for NutriTec® technologies.

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

Inter-company co-operation with DMT-CGS, a supplier of biogas upgrading and gas desulphurization.

## INITIAL TECHNOLOGY OVERVIEW

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**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.**

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**What is the name of the technology or service?**

Continuous thermal hydrolysis, nutrient recovery using membrane stripping

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**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.*

Increased biogas production  
Reduced sludge volumes  
Increase digester capacity  
Bioclass A quality sludge

Removal and/or recovery of nitrogen and phosphorous  
Production of struvite  
Production of ammonium sulphate  
Reduction of N<sub>2</sub>O emissions

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

None yet, but good potential for treatment of manure and/or other wastewater streams.

**Size of farm(s)?**

**Location of farm(s)?**

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

**Input material description/characteristics:**

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

Raw manure, digestate, screened digestate, paunch, other biomass.

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

Fraction.

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

Ongoing farm development.

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

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

Solids foundation required.

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

Fully scalable.

**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.*

Available on request for specific business cases.

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

Sustec only acts as a technology provider for TurboTec® and NutriTec®.

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

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

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**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

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

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