



TAXIS RESOURCE SYSTEMS

Sustainable Business Solutions for Environment, Energy & Development

TRS is a wholly owned business unit of Taxis Group, LLC

OVERVIEW



Taxis Resource Systems is committed to helping industrial, governmental, NGO and commercial organizations manage their environmental, safety & health risks and energy management needs with sustainable business solutions; specifically matching the best technology solutions to each client's unique business and environmental challenges.

We currently offer simple yet effective waste water, solids management and soon, energy technologies for municipal, agricultural, and marine applications. Our innovative, yet proven technologies are custom designed to meet the specific needs of each project

CLIENT FOCUS – Agriculture: Concentrated Feed Lots

Animal waste, if not properly managed, can be transported over the surface of agricultural land to nearby lakes and streams. Leaching from manure storage lagoons and percolation through the soil of fields, where animal waste is applied can contaminate groundwater resources.

Ag market piece - for illustration purposes. Can be applied to municipal wastewater/ marine wastewater and more as well.

According to EPA, the release of waste from animal feedlots to surface water, groundwater, soil, and air is associated with a wide range of human health and ecological impacts and contributes to the degradation of the nation's surface waters.



Pollutants in animal waste can impact waters through several possible pathways, including surface runoff and erosion, direct discharges to surface waters, spills and other dry-weather discharges, leaching into soil and groundwater, and releases to air (including subsequent deposition back to land and surface waters). Pollutants associated with animal waste can also originate from a variety of other sources, such as cropland, municipal and industrial discharges, and urban runoff.

The problems are real but our solutions are effective and economical. TRS provides environmental technical, regulatory, and EIS management support to keep your business on course.

Our Technology Approach

TRS provides technology transfer and integration services to the technology/IP

owner, bringing innovative yet proven environmental technologies, and “re-deployed” technologies from other industrial processes directly to the owner of an environmental liability or organizations desiring to minimize their environmental footprint while improving their financial position – including asset owners, PRPs, liability underwriters, or process facilities confronting significant performance, regulatory and/or economic challenges.

- *Waste Water Processing w/o Residuals Liabilities*
- *Residuals Management and Sale of By-Product*
- *Waste Water Liability to Drinking Water Resource*
- *Gasification of Waste Water Solids and Energy Production*
- *Hydrocarbon Fuel Opportunities*
- *Solid Waste to Fuel Options*

Carew Filtration & Energy



The Carew patented wave-coil centrifugal filter (WCF) and solids drying system along with its developing gasification/fuel cell technologies, when use alone or in combination with select complementary technologies, have the capability in the field to process municipal, agricultural, marine waste water, and most solid waste streams.

Our Wave Coil Filter (WCF) technology clarifies waste water streams, removing solids, oil and grease and biological contaminants down to the sub-micron range, without chemical treatment; extracts up to 50%+ solids in one pass, thus concentrating carbon-containing components for energy generation and/or hydrocarbon condensation and biofuels

production, or as a stabilized biosolid, used as a soil amendment.

(See next page – CEW Energy Solutions for additional information about this exciting developing technology offering.)

The resultant effluent may be further purified for human or animal consumption, or applied to the environment with no adverse impact to the receiving medium.



Our management systems approach enables tight integration of global, federal, state and community standards and expectations with a well-managed environmental “footprint” -- ensuring an long-term regulatory compliance and attainable financial savings.

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TRS/Carew Energy Solutions

Carew Energy and Water possesses patent rights, and has field validated its technology by processing agricultural-concentrated feed lot waste waters using its exclusive self cleaning combination centrifugal / mechanical filter in which the filtration apertures (pore sizes or filtration free spaces) can be electronically or pneumatically adjusted from a coarse range to micron and sub-micron sizes.

In the present "waste to energy" and fresh water representative application, the original variable self cleaning filter is modified to both filter and dewater liquid municipal/ agricultural/industrial liquid waste water and sludge such that the extracted solids have a high fuel value.

For economic reasons the high Btu solids will subsequently be blended with curbside dried waste solids are fed into a gasifier which converts carbon based solids into

hot gases which drive an electric turbine gen set.

As a result of the waste carbon extraction and drying, the Carew Energy system facilitates the conservation of energy in the carbonaceous waste streams as electric power which purifying the processed waste water.

Of greater long term importance is the new unpublished work on hydrocarbon synthesis with modified versions of the Carew filtration and energy system technologies to provide the production of synthetic hydrocarbon fuels for the transport industry.

Using the patented Carew Wave-Coil Centrifugal filter and filter press technology, solids or other bio-waste and fed directly into a gasification apparatus for electric power generation.

Conceptual system incorporating the Wave Coil Filter and Dryer; Water recycling; gasifier; electric gen set and/or biosolids production

