JCY Environmental

124 Woodcliff Road, Springdale, Arkansas USA Tel: 479-927-2672 Fax: 479-9272549

Consulting Proposal

November 5, 2012

To: Ecoprenuer, Argentina

From: James C. Young
JCY Environmental
Springdale, Arkansas USA

and Martin Balestie
CTI Uruguay

Objective

This proposal addresses consulting assistance to Ecoprenuer, Argentina by James C. Young (JCY) of Springdale, Arkansas, USA and Martin Balestie (MB) of Montevideo, Uruguay. Project tasks include assisting Ecoprenuer with selection and design of anaerobic and aerobic processes for treating industrial wastewater in South America.

Quotation

We hereby offer the following evaluation and testing proposal as a means of assisting Ecoprenuer in evaluating anaerobic and aerobic treatment options for industrial wastewater treatment:

Task	**Activity**	**Time**	**Cost**
1.	Travel to Argentina by JCY to review project sites and to review the sources and characteristics of waste streams that are the subject of design proposals by Ecoprenuer.	Anticipate five days plus travel expenses (per trip)	US$ 7,500
2.	Review of records for the industrial facility to evaluate the wastewater treatment loads and to conduct preliminary modeling of process options under current and future COD/BOD loadings.	20 to 40 hours work time	US$3,000 to US$6,000
3.	Review of design calculations and equipment selection as requested by Ecoprenuer.	20 to 40 hours work time	US$3,000 to US$6,000
4.	Additional time as requested by Ecoprenuer	US$ 1,200/day	as requested
	TOTAL		US$ 13,500 to US$19,500

The listed time and costs are estimates based on our experience with similar projects but can increase or decrease depending on the task list and scope of services that ultimately will be developed. Individual tasks will be initiated only upon approval by Ecoprenuer Argentina. A Qualifications and Experience Statement is appended below for your review.

Payment by Ecoprenuer will be made as follows: A retainer of US$ 4,000 will be required at the time a project is initiated. Time and expenses by JCY will be invoiced to Ecoprenuer at monthly intervals. Payment of each invoice will be made within 30 days after the invoice is submitted to Ecoprenuer. The retainer will be applied to the last invoice.

We look forward to assisting you to evaluate aerobic and anaerobic treatment options for industrial waste treatment in Argentina and other countries in South America.

November 5, 2012
James C. Young, JCY Environmental

November 5, 2012
Martin Balestie, CTI Uruguay

1/2012

James C. Young, Ph.D., P.E.

JCY Environmental, 124 Woodcliff Rd., Springdale, AR 72764 Tel: (479) 927-2672; Fax: (479) 927-2459

QUALIFICATIONS AND EXPERIENCE

QUALIFICATIONS

PROCESS EVALUATION

- **Selection of appropriate treatment technology**
  - **Biological processes**
  - **Physical/chemical processes**
  - **Combined physical/chemical processes**
- **Comparison of anaerobic and aerobic processes for municipal and industrial waste treatment**
- **Application of respirometry to treatment process operation and control**

TREATABILITY TESTING

- **Assessing treatability of organic and inorganic wastes**
- **Assessing anaerobic/aerobic biodegradation of specific organic chemicals**
- **Assessing methane production potential for wastewaters and other wastes**
- **Assessing treatability of inorganic wastes**
- **Design and operation of laboratory-scale and on-site pilot plants**
- **Estimation of kinetic parameters**

FORENSIC EVALUATIONS

- **Evaluation of existing treatment plants with view toward optimization of performance**
- **Assessment of process failures**

OPERATIONS ASSISTANCE

- **Preparation of process operating manuals**
- **Operator training**
- **Laboratory analyst training**

EXPERIENCE

CHEMICAL PROCESS INDUSTRIES

- **Petroleum Refining**
- **Polymer production**
- **Complex alcohols**
- **Soaps and detergents**
- **Dyes and pigments**
- **Alcohols and Aldehydes**
- **Glycols and de-icing fluids**
- **Phthalic acid (PTA, DMT, PET)**
- **Acrylic acid**
- **Plastics intermediates**
- **Sorbic acid**
- **Fiber Processing**
- **Fuel Oxygenates (MTBE, ETBE, TAME, TBA, TAA) and cyclic ethers (1,4-dioxane, 2,3-dioxolane)**
- **CO_2 capture and H_2S scrubbing solvents (e.g., MEA)**

PHARMACEUTICAL WASTES

- **Antibiotics**
- **Cosmetics**

FOOD and BEVERAGE PROCESSING

- **Bakeries**
- **Breweries**
- **Soft drink bottling**
- **Alcohol production**
- **Yeast production**
- **Candy manufacturing**
- **Canning wastes**
- **Grain processing**

PULP AND PAPER

- **Kraft mills**
- **Recycle mills**

OTHER WASTES

- **Landfill leachates**
- **Refuse-to-energy conversion**
- **Thermal sludge processing liquors**
- **Contaminated groundwater**
- **Oil contaminated soils**
- **Gas pipeline and tank farm wastes**
- **High-solids slaughtering wastes**

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Partial Client List: January 2012

Brown and Caldwell Engineers	**Denver, CO**
Rust Environment and Infrastructure	**Fairless Hill, PA**
Montgomery Watson Engineering	**Mexico City, Mexico/Pasadena, CA**
Eckenfelder, Inc.	**Nashville, TN**
ERM, Inc.	**Exton, PA**
JINDO Engineering	**Seoul, Korea**
Smith & Loveless	**Lenexa, KS**
ADI Systems, Inc.	**Fredericton, NB, Canada**
UEM, Inc.	**West Palm Beach, FL**
Siemens/US Filter/Zimpro	**Ames, IA; Rothschild, MN**
Advent/Environ	**Nashville, TN; Houston, TX**
HDR, Inc.	**Austin, TX/Omaha, NE**
TetraTech	**Ann Arbor, MI**
Parsons, Inc.	**Pasadena, CA**
Midwest Biogas	**Gaylord, MN**
Geosyntec Consultants	**Chicago, IL; Boca Raton, FL**
ITP Montevideo	**Montevideo, Uruguay**

Industries

Kellogg USA Inc.	**Lancaster, PA**
Eastman Chemical Co.	**Kingsport, TN (US, Malaysia, Singapore plants)**
SmithKline Beecham	**King of Prussia, PA (Panama, Costa Rico plants)**
Hoechst-Celanese Corp.	**Bishop, TX/Corpus Christi, TX/Wilmington, NC**
Siemens/U. S. Filter/General Filter	**Ames, IA**
Monsanto, Inc.	**St. Louis, MO**
NutraSweet, Inc.	**Augusta, GA**
Miller Brewing Co.	**Fort Worth, TX; Irwindale, CA; Trenton, OH**
Procter and Gamble	**Cincinnati, OH (US, Indonesia, Mexico plants)**
BP/Amoco	**Naperville, IL**
BP Biofuels	**San Diego, CA; Houston, TX; UK; Brazil**
DuPont	**Wilmington, DE**
Mitsubishi Chemical Co.	**Japan**
Angus Chemical Co.	**Buffalo Grove, IL**
Dow Chemical Co.	**Midland, MI**
TEMBEC Paper Co.	**Temiscaming, QE Canada**
Teknor-Apex	**Pawtucket, NJ (Haywood, TN plant)**
Merck & Co., Inc.	**White House Station, NJ**
ADM, Inc.	**Decatur, IL**
Coca Cola Company	**Atlanta, GA**
E.J. Gallo Wineries	**Modesto, CA**
Abengoa Biofuels	**Chesterfield, MO**
Tate and Lyle	**Decatur, IL**
Canfor-Taylor Pulp Mills	**Canada**
Beef Packing of Uruguay	**Uruguay**

Government Agencies

U.S. Environmental Protection Agency	**Cincinnati, OH**