

## Questionnaire -- Add-On Carbon Dioxide Stripping System (Distillery Type)

*Please provide the following information to assist us in preparing our proposal for you:*

Date: \_\_\_\_\_

Company: \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_      Telefax: \_\_\_\_\_      E-Mail: \_\_\_\_\_

The following is a summary of the minimum information required for a quotation on a CO<sub>2</sub> Stripping System to work with an existing, standard CO<sub>2</sub> recovery plant:

1. Fermentation data:

Type of alcohol produced: \_\_\_\_\_      Proof produced: \_\_\_\_\_ %

Proof spirit: \_\_\_\_\_ specific gravity      Indicate production in days per week: \_\_\_ days; \_\_\_ hours/day

Raw feedstock used to produce alcohol: \_\_\_\_\_

Fermenters (closed type) operating pressure: \_\_\_\_\_ PSIG ( \_\_\_\_\_ kg/cm<sup>2</sup>)

CO<sub>2</sub> pressure available for collection if different from fermenter operating pressure: \_\_\_\_\_ PSIG ( \_\_\_\_\_ kg/cm<sup>2</sup>)

Temperature of CO<sub>2</sub> gas at time of collection: \_\_\_\_\_ °F      \_\_\_\_\_ °C

**If available, please include the CO<sub>2</sub> Purity vs. Time Curve for a complete fermentation cycle.**

2. Existing CO<sub>2</sub> equipment:

Operating capacity of existing equipment:      \_\_\_\_\_ lb/hr      \_\_\_\_\_ kg/hr

Maximum rated capacity of existing equipment:      \_\_\_\_\_ lb/hr      \_\_\_\_\_ kg/hr

Equipment manufacturer: \_\_\_\_\_

**Please provide a sketch (PFD) of the existing CO<sub>2</sub> Recovery System.**

3. Dehydrator:

Minimum dewpoint –      At pressure: \_\_\_\_\_      Atmosphere: \_\_\_\_\_

4. Main CO<sub>2</sub> condenser:

Condensing pressure: \_\_\_\_\_ PSIG                      \_\_\_\_\_ Bar g.

Condensing temperature: \_\_\_\_\_ °F                      \_\_\_\_\_ °C

Design temperature: \_\_\_\_\_ °F                      \_\_\_\_\_ °C

Condenser surface area: \_\_\_\_\_ ft<sup>2</sup>                      \_\_\_\_\_ mt<sup>2</sup>Elevation of main CO<sub>2</sub> condenser (from floor level): \_\_\_\_\_ feet

## 5. Refrigeration compressor:

Refrigerant used: \_\_\_\_\_

Refrigeration compressor brand name and model: \_\_\_\_\_

Refrigeration compressor(s) maximum capacity: \_\_\_\_\_ tons

Refrigeration compressor saturated suction temperature: \_\_\_\_\_ °F                      \_\_\_\_\_ °C

Refrigeration compressor saturated discharge temperature: \_\_\_\_\_ °F                      \_\_\_\_\_ °C

Existing refrigeration condensing medium: \_\_\_\_\_

Water-cooled --      Temperature: \_\_\_\_\_                      Pressure: \_\_\_\_\_

Maximum temperature rise: \_\_\_\_\_

Maximum pressure drop: \_\_\_\_\_

Evaporative type --      Temperature: \_\_\_\_\_

## 6. Stripping system:

Recovery system minimum starting CO<sub>2</sub> purity planned: \_\_\_\_\_

Capacity: \_\_\_\_\_

## 7. Utility data:

Elevation at plant site: \_\_\_\_\_ meters                      \_\_\_\_\_ feet

Power voltage: \_\_\_\_\_ volts                      \_\_\_\_\_ phase                      \_\_\_\_\_ hertz

Control voltage: \_\_\_\_\_ volts                      \_\_\_\_\_ phase                      \_\_\_\_\_ hertz

Motor starting requirements --      Across-the-Line (Direct):      Up to \_\_\_\_\_ HP/KW

Reduced voltage (Wye-Delta): Up to \_\_\_\_\_ HP/KW

Soft start: \_\_\_\_\_

Motors --      Open Drip Proof (ODP):                      \_\_\_\_\_

Totally Enclosed, Fan-Cooled (TEFC):                      \_\_\_\_\_

Special considerations: \_\_\_\_\_

Wet bulb temperature:

Ambient temperature --      Maximum: \_\_\_\_\_ meters                      \_\_\_\_\_ feet                      Minimum: \_\_\_\_\_ meters                      \_\_\_\_\_ feet

8. Final CO<sub>2</sub> product: **Please provide the specifications for the final liquid CO<sub>2</sub> product desired.**