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Date:

December 31, 2019

Buyer: White-Light Farms, LLC.

751 Leo Hardy Road Eolia, MO. 63344

Seller:

Vulcan Drying Systems, LLC

1414 Riley Industrial Dr.

PO Box 783

Moberly, MO 65270

WHEREBY, Buyer agrees to buy, and Seller agrees to sell:

1. GENERAL SYSTEM DESCRIPTION

Reconditioned Vulcan Drying Systems Direct Fired Rotary Dryer with Particulate Control System: The following information provided in this proposal outlines the system components, integration and services provided by Vulcan Drying Systems. Our systems are preassembled at the factory complete with system components, piping, instrumentation, wiring, controls and support components. A factory acceptance test is performed prior to shipment to verify manufacturing, operability and some operations and maintenance training. Buyer's participation is encouraged. This system will be constructed primarily with used and reconditioned parts and components.

System consisting of:

Major Components Drying System

Feed System Consisting of

Horizontal feed conveyor

Rotary Dryer Consisting of

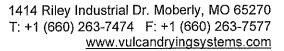
Stationary Direct Fired Rotary Dryer A minimum of 13.29 MMBtu burner Combustion Air Fan Burner and Fuel Train Auxiliary Infiltration Air Blower

Solids Discharge System Consisting of

Counter-weighted gravity operated flap gate on dryer discharge breaching

Particulate Control Unit consisting of

Approximately 30,000 cfm cyclone with rotary airlock Approximately 30,000 cfm Induced Draft Fan Ductwork connecting rotary dryer to cyclone and blower





Integration Consisting of

Instruments, piping, pipe supports, wiring and cable support, controls and control panel

Support Consisting of
Onsite support available for purchase

Options Consisting of

2. PROCESS DESCRIPTION

Feed material will be loaded into a horizontal feed screw conveyor via Buyers incline conveyor. The conveyor transfers the feed material to the rotary dryer.

As feed material is processed in the rotary dryer, vapor is collected for further processing. Dried material is discharged from the dryer through a flap gate to which Buyer will connect its discharge conveyor. In order to keep air temperature low and product temperature at discharge below 120°F an auxiliary infiltration blower is mounted alongside the burner on a ceramic fiber wool lined combustion chamber.

Vapor and particulate collected through the processing of the feed material leaves the dryer through ductwork attached at the top of the dryer's knock out box. Vapor and particulate are carried through the ducting to the cyclone via a draft pulled by induction air fan.

3. MAIN PROCESS COMPONENTS

Feed System - Dryer feed conveyor - horizontal screw

Primary Treatment Unit – direct fired carbon steel rotary dryer with feed breaching, flights and discharge knock out box and breaching, dryer powered by an electric motor and gear reducer. A minimum of 13.29 MMBtu burner with fuel train mounted on a ceramic fiber lined combustion chamber along with an auxiliary infiltration blower.

Discharge System – Counter-weighted gravity operated flap gate to feed Buyer's discharge conveyor.

Particulate Control System — ≈29,000 cfm cyclone with discharge airlock along with ductwork and controls.

Induced Draft Fan - electrical fan, spark resistant ≈30,000 cfm

Electrical General – Motor horse powers and speeds are based on 480V/60htz/3-phase power input. Field wiring to be primarily heavy-duty cords.



Generator or Power Supply - to be supplied by Buyer - Sized for system at 460v and 60Hz

Notes

• Final sizing of described equipment below will be calculated during design phase of the project.

4. PROCESS SPECIFICATIONS

1.0 Process Specifications

Table 1.1 Site Conditions

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Equipment indoors or outdoors	Outdoors (assumed)
Relative humidity	50% (assumed)
Table 1.2 Process Conditions	
Process type	
Material	Chopped Hemp ≤ ½ inch
Total Feed rate	5 to 8 wet tons/hr.
Discharge temperature	125°F
Moisture by mass, wet basis	≤ 80% water by mass
Table 1.3 Material Specifications	
Material name(s)	Chopped Hemp
2.0 Bulk Solids Handling Equipme Table 2.0 Solids Feed & Discharg	ge Equipment
Flow Configuration Feed (tables 2.1)	Horizontal feed conveyor with small hopper
Flow Configuration Discharge (tables 2.2)	Rotary airlock Carbon Steel
Materials of construction	Carpon Steel
Table 2.1 Dryer Feed Conveyor	
Туре	Horizontal screw conveyor
Materials of construction	Carbon Steel
Table 2.2 Dryer Discharge	
Туре	Gravity operated counter weighted flap gate
Materials of construction	Carbon Steel
Table 2.3 Cyclone Discharge	
Туре	Rotary airlock
Materials of construction	Carbon Steel



3.0 Primary Treatment Unit Specifications Table 3.1 Primary Burner

Туре	Industrial
Firing rate	≈16 MMBtu/hr
Fuel(s)	Natural gas
Table 3.2 Primary Treatment Unit	
Type	Stationary Direct rotary dryer
Materials of construction	Carbon steel
Size	≈8'x50'

4.0 Particulate Control Equipment Specifications Table 4.1 Particulate Control

Major equipment	Ductwork → Cyclone with rotary airlock → Induced air blower fan
Table 4.2A Cyclone	
Туре	≈29,000 cfm
Materials of construction	Carbon Steel
Table 4.2B Ductwork	
Туре	Square
Materials of construction	Carbon Steel

Table 4.2C Discharge Airlock for Cyclone

Materials of construction	Carbon Steel			
Table 4.3 Induced Draft Fan				
Capacity	≈29,000 scfm			
Materials of construction	Carbon Steel			

5. PROCESS CONDITIONS

Material	Chopped Hemp ≤ ½ inch
Total Feed Rate	5 to 8 wet tons/hr.
Feed Temperature	60°F
Moisture by mass, wet basis	80% water
Heat Requirement	≈13.29 MMBtu/hr
Fuel Type	Natural Gas
Discharge Moisture	10-12%



6. Process Flow Diagram

