XXXXXXXXXXXX PAPER
(Mill Site References)

Date:
TO: (Vendor)

ATTN:

Dear

This is a solicitation for bids to supply centrifugal air compressors for

(Mill Site and Contact Information)

This is a request for proposal on the air compressor requirements set forth below:

As a part of the bid evaluation process your company is **required** to provide a letter, ***signed by a corporate officer or licensed professional engineer***, stipulating to and certifying the accuracy of the data provided in answer to the items listed, below as well as the guaranteed performance of the compressor(s) and auxiliary equipment you have proposed to sell to (Mill site and reference)

Full compliance with the signatory requirement is mandatory and will not be waived.

Please note that failure to accurately complete and submit this form properly conformed and signed as required will result in your company being delineated as a non-responsive vendor. This requirement will not be waived.

You are free to take specific written exceptions to any item for which you cannot provide data and/or offer an alternative.

Net efficiency and life cycle cost analysis is an underlying test that will be applied to this bid.

Please take specific notice: Pose all questions and submit ALL documents and correspondence to (Mill Site and References), the authorized representative for this initial evaluation process.

TECHNICAL NOTE: It is a ***mandatory requirement*** that all performance flows be clearly stated in ACTUAL CFM (not ICFM or SCFM) at discharge pressure at the compressor outlet, site elevation, temperature and relative humidity. Any deviation from this requirement will void this offering.

Number of compressors to be acquired:_____

Auxiliary or peripheral equipment:

After Cooler: __X__Water Cooled ____Air Cooled

Dryer: _____Refrigerated __X___ Desiccant : _____ Other: _____

Pressure Dew Point required: _____

Actual net CFM at the discharge of the compressor at ***(note tailor to project requirements)*** psig is ____ACFM

Site Conditions

Estimated Perf. Cond. 1
14.7 PSI,A
95 F
85 F
95 %
100.0 PSI,G

Estimated Perf. Cond. 2
14.7 PSI,A
90 F
85 F
90 %
100.0 PSI,G

Estimated Perf. Cond. 3
14.7 PSI,A
80 F
85 F
90 %
100.0 PSI,G

Make: _____ Model: _____
___Reciprocating _____Rotary Screw __X__Centrifugal ____Sliding Vane

Number of stages: _____

Net overall compressor efficiency at best efficiency point of _____% at duty point at a pressure of 100_ PSIG and flow of ____ ACFM at the discharge flange of the compressor.

For each stage, separately list;

Stage inlet pressure_____
Stage inlet temperature_____
Compressibility factor_____
Speed of rotating element: _____
Total inlet capacity _____ACFM
Capacity at reference conditions _____ACFM at the discharge port
Stage discharge _____psig
Stage discharge temperature ____degrees F
Discharge compressibility _____
Compression ratio_____
K value of the gas_____
Volume exponent_____
Volumetric Efficiency losses _____%
Volumetric Efficiency OE _____%
Volumetric Efficiency FE _____%
OE Indicated Power _____HP
FE Indicated Power _____ HP
Cooler pressure drop _____%
CTD _____degrees F
Condensation to liquid phase water at each stage intercooler ____ Gallons/MIN
Drain port size NPT_____(minimum ½" NPT)

NOTE: XXX Company Best Practices require these units to be supplied with CDI/Drain-All drainage devices. In the event that you cannot do so, shipment without OEM drains is necessary and the mill will supply and install these devices.

Cooler heat load _____Btu/HR _____

Available cooling water temperature is 85 degrees F.

Cooler water temperature rise at full compression capacity _____degrees F

Cooler water flow required if water cooled at full compression capacity ___GPM.

Specific power per 100 ACFM at _100_PSIG-_____HP +/- ____%

Compressor turndown information:
Overall guaranteed turndown _____%
For each 3% of turndown state
Motor KW or amps _____
% blow of valve open ____
% Inlet valve closed ____
% full load reduction ____

Discharge air temperature _____ degrees F at the discharge flange of the compressor.

Pressure drop through the clean inlet suction filter_____PSIG at _____ACFM

Pressure drop through the inlet modulating valve mechanism_____PSIG at _____ACFM

_____ Inlet ACFM at the site conditions stated on this form

_____ Compression ratio

Differential in pressure from the compressor discharge at the exit of the compressor to the exit of the after cooler/separator____ PSIG at ____ ACFM (if supplied) and condensate flow in _____GPM

Differential in pressure from the compressor discharge to that at the exit of the dryer (if any supplied by vendor) ____ PSIG at ____ ACFM

Compressor horsepower losses due to heat, friction and mechanical losses _____HP

Percent accuracy and repeatability of panel mounted gauges supplied with the compressor. ___%

Percent accuracy and repeatability of transducers-List each service and %.

Motor Issues:

Nameplate Horsepower_____
RPM _____
Voltage___4160_____
_60_Cycles (Htz)
__3_ Phase
Service Factor _____
Insulation Class: ____
Type: ____ODP ____TEFC _____XP
Motor Nameplate Efficiency: _____
Motor Speed: _____RPM
Special classification i.e. Mill and Chemical Duty: _____

Bearings:

1. Motor ____Rolling Element _____Sleeve _____Other (Describe)

2. Compressor main drive gear: ____Rolling Element _____Sleeve _____Other (Describe)

3. Compressor stages: ____Rolling Element _____Sleeve _____Other (Describe)

Lubrication type for:

Motor:
Compressor:

Motor Safety Devices ____RTD _____ Thermocouples, _____ Vibration Sensor(s)

Describe each instrument supplied with this offering with particularity.

Requiring an overall motor power input of _____kw using a power factor of _____ and a motor nameplate efficiency of _____ *with the motor* ***not*** *running in the service factor.*
NOTE to bidder: Any designs which result in the motor running into the service factor are unacceptable under any circumstances.

Response to control signals:

State the time in seconds for the compressor to fully respond to the initial signal to:
Load_____
Unload_____
Start from a shutdown condition and come to full load ____
Coast down to stop ____
Rotational speed or percent of speed during coast down where the compressor can be restarted without damage to the compressor_____

Controls:

All units must be supplied with Case Engineering Air Logix control panels with Air Master system control software. Contact Case Engineering at 812-422-2422, 1401 West Franklin Street Evansville, IN 47710, for interface assistance and details.

If your offering is a centrifugal compressor, you must submit a pressure at discharge versus flow at discharge in ACFM **performance map curve** *specifically delineating the best efficiency point eye of the curve with stated efficiency and subsequent 1% efficiency off set from best efficiency point curves out to the surge points.*

Please note- This is a mandatory requirement for being considered a responsive bidder and will not be waived.

Aftermarket On Site Maintenance Support:
Mechanical Maintenance Manuals Supplied____Yes ___No
O.E.M. Bearing and Oil Seal Numbers Supplied___Yes ___No
Internal Clearances Specifications Supplied ___Yes ___No
Lubrication:

Does the compressor require a special or proprietary single source lubrication ___Yes ___No

Describe the constituent make-up of the lubricating oil, including the viscosity in SSU at 70 F and at running conditions, chemical description, thermal conductivity, flash point, maximum operating temperature, and include a current MSDS sheet, and the amount the compressor requires in U.S. gallons.

If your offering is of an “oil free” design, provide a number reflecting the anticipated parts per million estimated carryover of oil and or hydrocarbon as a result of entrainment in the compressed air stream from weeping from bearings, oil seals, and other running components of the compressor._____

What is the design average operating temperature high and low boundaries of the lubricant in degrees F? _____High ____Low

What is the amount of lubrication required in gallons? ____

What is the cooling requirements in terms of cooling water circulation amount, temperature at approach and discharge of each heat exchanger?

Lubrication circulation type ____Splash _____ Oil Pump either internal shaft drive ____ or external motor driven ____.

What is the average recommended run life of the lubrication in hours before recommended change?_____

If the oil is proprietary, list the part number, description, and price per gallon._____

The bidder shall provide the recommended test methods (ASTM or otherwise), normal acceptable ranges, and condemning limits for all critical oil analysis parameters (TAN, pH, viscosity, etc.)”,

What is the recommended run life in hours of any filter/demister before change out? ____

List filters by Name, Part Number, Manufacturer’s Model Number, and current price each.

State the net weight of the assembled unit._____

State the WR2 on start-up. _____

In the case that the buyer will be requesting a **certified** performance test to show compliance with the guaranteed performance before accepting delivery, quote this as a separate option.

$_____

Price per unit: _____

*Delivery time to site after receipt of Purchase Order: _____

Warranty time frame: _____

Costs for installation and start up services: _____

Certified performance test cost: _____

Time added to delivery if a Certified performance test is required: _____

Aftermarket Manufacturer's Service and Support Assistance

It is important for the mill to have immediate access to qualified compressor mechanics should problems arise. Please list qualified personnel, including home town, and mobilization time required to arrive at the mill in Jacksonville, FL.

Technician 1 Name_____
Technician 1 Hometown_____
Technician 1 Mobilization Time_____

Technician 2 Name_____
Technician 2 Hometown_____
Technician 2 Mobilization Time_____

Technician 3 Name_____
Technician 3 Hometown_____
Technician 3 Mobilization Time_____

Closest factory warehouse stocking parts for the compressors you are offering:
_____

Hourly cost for technician(s) :_____

List other costs associated with a Service Technician site
visit:_____

List costs associated with start-up of new compressors and planned time on site to commission the units to full operating status:_____

*Liquidated damages in the amount of 5% or the total purchase price per week will be assessed if the stated delivery time is not met. This is necessitated by the cost burden to

the mill for delay of construction/installation/production schedules and costs to the mill that result from a delayed delivery.

The above data is certified and stipulated as true, correct, complete, certain and not misleading.

Signed: _____ Date: _____

Printed name: _____
Title: _____

Company: _____

Address: _____

_____

Phone Number: _____

E-mail address: _____

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