Group WS-2

Proposal for Furnishing
Control Panels for Water Wells

City Manager, Honorable Mayor and City Council
City of D'Iberville
P. O. Box 6519
D'Iberville, MS 39540

Mayor and Council Members:

Pursuant to your advertisement, we do hereby submit this proposal for furnishing, as ordered by the city, Control Panels for Water Wells, in accordance with the specifications listed below, for a period of eleven months, beginning November 1, 2007, and reserving the right to request an extension of contract for a second term of twelve months, which is as follows

Water Well Control Panels

		Brand	**Unit price**
1.	200hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
2.	150 hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
3.	125 hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
4.	100 hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
5.	75 hp, 3 phase, 480 volt pump motor, outside enclosure	_____	$_____
6.	75 hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
7.	50 hp, 3 phase, 240 volt pump motor, outside enclosure	_____	$_____
8.	30 hp, 3 phase, 480 volt pump motor, outside enclosure	_____	$_____
9.	30 hp, 3 phase, 480 volt pump motor, inside enclosure	_____	$_____
10.	30 hp, 3 phase, 240 volt pump motor, outside enclosure	_____	$_____
11.	30 hp, 3 phase, 240 volt pump motor, inside enclosure	_____	$_____

1. Control Panel Specifications

. General

A. The control panel enclosure shall be generously oversized to accommodate the system phase monitor, well motor starter, chlorine booster pump starters (2), control components. GFCI convenience receptacle, panel heater with thermostat and related components. Externally mounted lightning arrestors/protection shall be provided to protect the motors and control components. Additional space shall be provided for SCADA units or other future accessories.

B. The enclosure shall be constructed of stainless steel, rated NEMA 4X, with drip hood for outside panels and NEMA 3 for inside panels, with no top side penetrations allowed. A single lockable handle which simultaneously operates three latches located the top, middle and bottom of the door (Three Point Latch) shall be provided.

C. All power and control wires shall be stranded copper type THW or better.

D. All selector switches, pilot lights, hour meters, Dallas key reader and other controls shall be mounted on an interior anodized aluminum or stainless steel dead front panel with a continuous aluminum or stainless steel hinge. Circuit breakers shall be operable through the dead front panel.

E. An automatic fluorescent panel light and a thermostatically controlled electric panel heater shall be installed within each enclosure.

F. A 110 Volt GFCI duplex receptacle shall be provided inside the control panel and mounted through the interior dead front panel.

G. All points necessary for external connection in the control panel whether power or control shall be wired to a terminal strip located at the top or bottom of the enclosure as directed by the engineer. The terminal strip shall be permanently marked with the same designations as the wire connected to it.

H. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions shall be marked with the same designation.

I. All circuit breakers, motor starters, relays, timers, and other control devices mounted within the control panel shall be labeled for identification both within the panel and on the wiring schematic with corresponding designations.

J. Control power shall be 120 Volts and shall be protected by the correctly sized circuit breaker.

K. All controllers and other panel mounted devices shall be mounted on an interior dead front panel. The dead front panel shall be constructed of anodized aluminum and shall have a continuous aluminum hinge.

L. All selector switches, start-stop pushbuttons, and pilot lights shall be identified with an engraved bakelite nameplate.

M. All approval drawings shall be prepared per NFPA 79 Standards for Engineers review prior to any fabrication of control equipment. The controller shall be produced by a UL 508 listed shop. Proof of label availability shall be submitted with approval drawings.

N. The controller manufacturer shall provide a written warranty with approval drawings covering all control materials and parts furnished for a period ending one year after final acceptance of the project. This warranty shall cover all material replacement, labor, and travel expenses.

O. The controller manufacturer shall show satisfactory evidence that he maintains a fully equipped factory organization capable of furnishing adequate services for the equipment furnished, including replacement parts within a 200-mile radius of the job site. Suppliers employing outside organizations for "one call" service shall not be considered.

P. The basic control panel must be constructed to accommodate cabling and control wiring from a stand alone Soft-start or VFD Panel.

2. Well Control Panel

A. The panel shall be designed for either 240V or 480V, 3Phase, 4 Wire, power.

B. Normal main breaker – provide a properly sized normal main breaker to disconnect normal power to the control panel.

C. Emergency main breaker – provide a properly sized emergency main breaker to disconnect emergency power to the control panel. The normal and emergency main breakers shall have a walking beam type interlock to prevent both breakers from being in the "on" position simultaneously.

D. Lightning arrestors and protection will be properly installed in all electrical control systems. The well site will be tested and proper grounding methods utilized. A power monitor with 8-pin base will be installed in all electrical control panel enclosures. For 240V and 480V systems, a Time Mark 258B or equivalent will be installed; for 480V systems, a Motor Saver 102A or equivalent shall be installed.

E. Provide a properly sized combination circuit breaker and NEMA rated, Square D type 8536 motor starter or equal, with the following additional equipment:

1. Provide a Hand-Off-Auto selector switch (H-O-A), to provide manual and automatic operation for the new well motor. In the automatic mode, the new well shall start and stop based on commands from the SCADA or local pressure switch.
2. Provide a field adjustable well backspin timer (BST), per component specifications. The timer shall prevent the restarting of the well without a time delay.

F. SCADA – provide SCADA (Mission Co. M800 Unit) or equivalent, per component specifications.

G. Chlorine booster pump – provide a properly sized combination circuit breaker and NEMA rated Square D type 8536 motor starter, or equivalent, with auxiliary contacts rated at a minimum of 10 amps or a power pole adder.

H. Control power transformer – provide a properly sized control power transformer with primary over current protection, 120V power for the loads listed below.

I. Branch circuit breakers – provide the following 120V single pole branch circuit breakers:

1 each - 20 amp, 1 pole for control power
1 each - 20 amp, 1 pole for hand tool receptacle

3. Component specifications

A. Lightning arrestor – arrestor shall be silicon oxide varistor type, having current rating of 60,000 amperes and 1500 joules. The case material shall be PVC and the arrestor shall be designed for 480 volt, three phase, 4 wire service.

Tag	Service
LA	Lightning Arrestor

B. Phase failure phase unbalance and phase reversal relay – relay shall be of the negative sequence filter type. The filter shall have a high internal impedance for accurate voltage following. The unit shall be of the voltage comparative type with preset point that will turnoff or de-energize the output relay after 5 seconds.

Tag	Service
PM	Phase Monitor

C. The Backspin Timer shall have a repeat accuracy of +0.1% with no first shot effect. Setting accuracy shall be +2% with reset time of 50 milliseconds maximum. Recycle time shall be no more than 150 milliseconds during timing and 16 milliseconds after timing. Each timer shall be provided with two led indicators, indicating timing and on. Timer output resistive at 120 VAC.

Tag	Service
BST	Backspin Timer

C. Provide Mission SCADA M800 (or equal) unit set-up per City requirements at time of order.

Tag	Service
SCADA-1	New Well-Telemetry Transceiver

Prices quoted shall be F.O.B D'Iberville from stock, if otherwise please state.

_____ _____ _____
Authorized Signature Title Date

_____
Company Name

_____
Mailing Address

_____, _____ _____
City State Zip

_____ / _____ / _____
Telephone Number Fax Number Email Address

_____
City Privilege Tax Number (If applicable)

Your attention is called to the fact that the state of Mississippi has a reciprocal preference law in regards to resident contractors. The states treatment of non-resident contractor's and the local preference percentage shall be applied in evaluating the bids. It is the responsibility of the vendor to submit a copy of their state's preference law with the bid. Failure to do so may be reason to reject the bid.

Notice to bidders:

All bids are to be submitted on this form and shall be submitted in sealed envelopes marked in the lower left hand corner **"Group K1 – Control Panels for Water Wells",** to be opened Tuesday, October 30, 2007 at 10:00 A.M.". Bids not submitted on this form may be disqualified.

Hold harmless: Contractor agrees that it will, and hereby does, indemnify, defend and hold harmless city of D'Iberville from and against any and all claims, damages, losses, costs and expenses of every kind and nature, including court costs and attorney fees and claims for damages resulting from or arising out of any infringement claim or claim of bodily injury, death or damage to real or tangible personal property caused by contractor and/or its partners, principals, agents, employees or subcontractors in the performance of this contract. The City of D'Iberville will notify the contractor in writing of any claim to be indemnified hereunder, of which city has knowledge, and contractor in turn will promptly notify city of any such claim. Contractor shall, at its sole expense, control the defense of such suit to the extent allowed by Mississippi law. The parties agree to cooperate with one another in the defense of any such matter.

Any request for price increase during the term of contract will be rejected. Should this rejection result in the cancellation of the contract, the vendor shall be removed from the qualified bidders list for twenty-four (24) months. If adverse conditions exists industry wide, modifications to disqualifications may be made as circumstances warrant. The city reserves the right to request from the vendor an extension of this contract for a second term of twelve (12) months, commencing October 1, 2008, with all prices remaining constant.

Address bid to:

City Clerk
City of D'Iberville
P. O. Box 6519
D'Iberville, MS 39540