

**Lee County Board Of County Commissioners
Agenda Item Summary**

Blue Sheet No. 20020888

1. REQUESTED MOTION:

ACTION REQUESTED:

Approve Bid Waiver #W-020710 requested by Lee County Utilities to waive the formal quotation procedure and accept Option 1 of the written quotation from the manufacturer, Coffman Systems, Inc. to purchase four (4) Universal Vertical Lime Slaking Systems, model 4140THLC and 1 (1) 100 ton Hi Rise Bulk Storage Silo with appurtenances for the total sum of \$360,800.00 delivered, inclusive of system start-up services. F.J. Nugent & Associates Inc. is the Manufacturer's Agent for Coffman Systems, Inc.

WHY ACTION IS NECESSARY:

Pursuant to Section 9.4.1 of the Lee County Purchasing & Payment Procedures Manual, approved by the Board on 3.21.00, purchases over \$50,000.00 must be approved by the Board.

WHAT ACTION ACCOMPLISHES:

Standardization of high efficiency lime slaker equipment for water treatment facilities to upgrade existing outdated unreliable slakers for treating Lee County's drinking water.

2. DEPARTMENTAL CATEGORY: 10
COMMISSION DISTRICT #

A10A

3. MEETING DATE:

08-20-2002

4. AGENDA:

CONSENT
 ADMINISTRATIVE
 APPEALS

 PUBLIC
 WALK ON
 TIME REQUIRED:

5. REQUIREMENT/PURPOSE:
(Specify)

STATUTE
 ORDINANCE
 ADMIN. AC-4-1
 CODE
 OTHER

6. REQUESTOR OF INFORMATION:

A. COMMISSIONER
B. DEPARTMENT Public Works
C. DIVISION Utilities

BY: Rick Diaz/Director

[Handwritten Signature]
8/5/02

7. BACKGROUND: On July 18, 2002, the Division of Purchasing received a request from Utilities to waive the formal quotation procedure to purchase four (4) Universal Vertical Lime Slaking Systems, model 4140THLC, \$67,900 each and 1 (1) 100 ton Hi Rise Bulk Storage Silo, \$89,200.00 with appurtenances for the total sum of \$360,800.00 delivered, inclusive of system start-up services. Coffman Systems, Inc. shall provide two lime slaker systems at the Green Meadows Water Plant, and two slaker systems and the silo at the Corkscrew Water Plant to upgrade existing outdated Wallace & Tiernan units. These units are high-grade stainless steel that won't corrode and fall apart like the carbon steel units now in service, and are high efficiency units that use modern automation to achieve accurate chemical mixing and dosage. All parts are interchangeable between them and can be obtained through local suppliers or the manufacturer within 24 hours or less with no proprietary parts unlike existing units.

Therefore, this request is being made to waive the formal quotation procedure and standardize on lime slaking systems to maximize Lee County's operations and maintenance resulting in cost savings.

Funding is available in account string CIP20711448712.506410, Corkscrew, and 20710448712.506410, Green Meadows.

ATTACHMENTS:

- Memorandum from Utilities dated 5.13.02
- Coffman Systems, Inc. quotation dated 7.15.02
- Coffman Systems, Inc. addendum dated 7.30.02

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
<i>[Signature]</i> 8/5/02	Janet Sheehan 8-5 8/5/02	N/A	<i>[Signature]</i>	<i>[Signature]</i> 8/5/02	OA <i>[Signature]</i> 8/6/02	OM <i>[Signature]</i> 8/6/02	Risk <i>[Signature]</i> 8/7/02	GC <i>[Signature]</i> 8/6/02	<i>[Signature]</i> 8-7-02

10. COMMISSION ACTION:

APPROVED
 DENIED
 DEFERRED
 OTHER

Rec. by CoAtty
Date: **8/5/02**
Time: **2:40 pm**
Forwarded To:
[Signature]
8/6/02 8:50 AM

RECEIVED BY
COUNTY ADMIN. **EW**
8/6 12:40
COUNTY ADMIN.
FORWARDED TO: **DS**
8/7 12:00



Lee County
SOUTHWEST FLORIDA

INTEROFFICE MEMORANDUM
FROM
UTILITIES DIVISION

Phone: (941) 694-4038 Fax: (941) 694-2370

Date: 5/13/02

TO: Rick Diaz

From: Thomas Hill 

SUBJECT: STANDARDIZATION OF LIME SLAKER EQUIPMENT FOR WATER TREATMENT FACILITIES TO COFFMAN SYSTEMS, INC.

I WOULD LIKE TO KINDLY REQUEST THAT THE WATER TREATMENT DIVISION OF UTILITIES BE ALLOWED TO STANDARDIZE OUR LIME SLAKER EQUIPMENT FOR ALL WATER PLANTS. THERE ARE MANY BENEFITS THAT WILL BE TO OUR ADVANTAGE IN MAINTENANCE, OPERATIONS, AND COST SAVINGS. THESE ADVANTAGES ARE LISTED FOR YOUR CONVENIENCE.

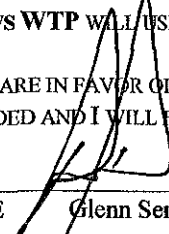
- 1) THE ENTIRE UNIT IS HIGH-GRADE STAINLESS STEEL AND WILL NOT CORRODE AND FALL APART IN THE HARSH ENVIRONMENT TO WHICH THEY ARE SUBJECTED TO 24/7/365. ALL CARBON STEEL UNITS IN SERVICE AT PRESENT ARE CORRODING BEYOND REPAIR AND NEED TO BE UPGRADED TO CORROSION FREE LONGER LIFE UNITS.
- 2) THERE ARE NO PROPRIETARY PARTS BUILT INTO THE MACHINE, ALL PARTS AND ACCESSORIES CAN BE OBTAINED THROUGH OEM OR LOCAL SUPPLIERS WITHIN 24 HOURS OR LESS. LEE COUNTY WOULD NOT BE LOCKED INTO PURCHASING REPLACEMENT PARTS ONLY FROM THE SLAKER MANUFACTURER.
- 3) ALL PARTS ARE INTERCHANGABLE WITH THE OTHER SLAKERS, ALLOWING FOR THE NEED TO ONLY STOCK ONE PART TO BE THE BACKUP FOR 5 SLAKERS.
- 4) THE UNITS DESIRED ARE HIGH EFFICIENCY UNITS THAT UTILIZE MODERN AUTOMATION TO ACHIEVE ACCURATE CHEMICAL MIXING AND DOSAGE. THIS WILL AID IN ANNUAL SAVINGS OF LIME USED AT EACH OF THE FACILITIES.
- 5) COFFMAN INDUSTRIES IS WITHIN 2 HOURS OF OUR FACILITIES. SHOULD THE NEED ARISE FOR ANY TECHNICAL ASSISTANCE THE VENDOR IS READILY AVAILABLE.
- 6) UNIT CURRENTLY IN SERVICE PROVIDES MINIMUM MAINTENANCE, NO CORROSION, EXCEPTIONAL RELIABILITY AND LONGEVITY.

THESE UNITS ARE BADLY NEEDED AT OUR GREEN MEADOWS AND CORKSCREW WATER TREATMENT FACILITIES. THE EXISTING SLAKERS HAVE OUTLIVED THEIR USABLE LIFE, ARE TECHNOLOGICALLY OUTDATED, AND ARE BECOMING UNRELIABLE FOR TREATING OUR DRINKING WATER. IT IS MY DESIRE TO UPGRADE THESE UNITS TO COFFMAN SYSTEMS, INC., SLAKERS, UTILIZING TWO SEPARATE CIP FUNDING SOURCES.

CORKSCREW WTP WOULD USE CIP #207114 FOR TWO SLAKERS TO BE PURCHASED BY LCU, AND INSTALLED BY HARTMAN ENGINEERS' CONTRACT MANAGER.

GREEN MEADOWS WTP WILL USE CIP #207104 FOR TWO SLAKERS TO BE PURCHASED AND INSTALLED BY LCU PERSONNEL.

IF YOU ARE IN FAVOR OF STANDARDIZING THE COFFMAN SYSTEMS INC., LIME SLAKER UNITS PLEASE SIGN IN THE SPACE PROVIDED AND I WILL FORWARD TO PURCHASING FOR FURTHER PROCESSING.

Approved:  Rick Diaz P.E., Utilities Director
cc: Ivan Velez P.E. Glenn Semanisin P.E.

Date: 5/31/02

COFFMAN SYSTEMS, INC.

WATER, WASTE & INDUSTRIAL PROCESS EQUIPMENT
SALES – ENGINEERING – SERVICE

QUOTATION

TO: Lee County Environmental Services
1500 Monroe Street
Fort Myers, FL 33902

QUOTATION NO. 20020702R1
DATE: July 15, 2002
SUBJECT: LIME SYSTEM

FEEDER & SLAKER SYSTEM

ATTENTION: Tom Hill and Glen Semanisin, P.E.

FROM: COFFMAN SYSTEMS, INC.
300 Stevens Avenue
Oldsmar, Florida 34677
Ph. (813) 891-1300 Fax: (813) 891-1266

DESCRIPTION

REQUIREMENTS

Coffman Systems Inc. shall provide four (4) lime feeder and slaker systems to replace existing Wallace & Tiernan units, (2) in the Green Meadows Plant, and (2) in the Corkscrew Plant.

EQUIPMENT OFFERED

1.1 DESCRIPTION:

1.1.1 Three (3) Coffman Systems Universal Vertical Lime Slaking Systems, model 4140THLC specially designed for installation under existing storage bins, and one (1) Coffman Systems 100 ton Hi Rise Bulk Storage Silo, with Feed system and Coffman Systems Universal Vertical Lime Slaking System model 4140THLC.

1.1.2 The Hi Rise Storage and Feed System shall be capable of receiving and storing bulk pebble quicklime, slaking the pebble lime to produce a slurry, and removing the grit. The system shall consist of one (1) skirted type silo, station roof with handrails, ladder access, bin activator, level indicators, fill pipe, truck unloading panel, dust collector, lime feeder, slaker, grit remover, slurry tank, ventilation equipment, and process control panel. The system shall be factory pre-assembled to the maximum practical extent. Factory assembly shall include equipment installation within the bin skirt, painting, and wiring prior to shipment.

1.1.3 The quicklime systems will be designed for effective performance, pleasing appearance and economical operation for feeding and slaking 3/4" Pebble Quicklime, AWWA, Specification No.B-202-65. Maximum feed rate to be 2000 pounds per hour.

These will be factory built systems fabricated with accessories required for your specific Lime feeding application. The entire unit will be designed, fabricated and assembled at our factory and delivered to your job site. All equipment will be assembled as a unit and we will unload. Connection of electricity and water supply will be provided by Lee County.

Each system will consist of the following items of equipment, and accessories; items 2.1, 2.2, 2.3, and 2.4 are only supplied with the Hi Rise System.

2.1 LIME STORAGE SILO

2.1.1 Storage Silo: The chemical storage silo will be furnished complete for installation by others. This silo will be nominal 12 ft. diameter, approximately 40 feet in height, with a minimum chemical storage capacity of 100 tons of quicklime. The silo storage section shall be fabricated of 1/4 inch plate minimum, the equipment section shall be fabricated of 1/4 inch plate minimum. The storage bin will have a 60 degree conical hopper bottom terminating in a flange constructed of 1/4 inch steel plate. The flange will accommodate the bin gate mentioned elsewhere in these specifications. The bin will be supported by an interior flange in the skirted sections. An overhead, roll-up steel door, 6' wide by 8' high, complete with rails and key locks will be provided in the skirted section for entering the lower level chemical slurry room.

2.1.2 Structural Design: All portions of the chemical storage and feed system which are exposed to natural environment both directly and indirectly will be designed to retain their structural integrity and maintain its functional operation during a 130 MPH wind, a temperature range of -20 to 105 degree F., a three (3) inch per hour rainfall, and/or a snow load of 55 pounds per square foot. These are the minimum requirements system supplier will design around. The system will also be designed for seismic conditions. These are minimum conditions for design. Where applicable national code requirements exceed these conditions, the codes will govern.

2.1.3 Manway Hatch: A 24 inch square opening manway hatch and cover with adjustable "T" bolt clamping bars will be provided in a convenient location on the top of the storage bin. Hatch will incorporate a vacuum pressure relief valve and be securely gasketed with a minimum 3/8 inch heavy-duty rubber gasket material.

2.1.4 Ladder, Cage, Platform and Handrail: A ladder, cage, platform (if required) and handrail will be provided on the bin and fabricated to meet OSHA standards.

2.1.5 Anchor Bolts: System supplier will furnish all the necessary anchor bolts for installation by contractor in the supporting concrete structure. Anchor bolts will be designed to withstand both uplift and shear.

2.1.6 Power Vent: A thermostatically controlled power vent will be furnished in the upper section of the storage bin. Thermostat will open or close whenever temperature reaches a predetermined set point and be adjustable from 30 to 110 degree F. Vent to be corrosion resistant, heavy-duty, and be complete with weather-tight enclosure. Manual operation of the vent will be accomplished from a selector switch located on the main control panel.

2.1.7 Lighting: Supplier will furnish two sets of fluorescent lights, complete with light switch located near the entrance door and necessary ballasts.

2.1.8 Painting: The silo exterior and interior shall be coated with a high build self priming epoxy. Total dry film thickness shall be 5.0 mils. Associated manufactured equipment shall be manufacturer's standard finish.

2.2 PNEUMATIC FILL SYSTEM

2.2.1 Fill System Conveying Pipe: Schedule 40, 4 in. diameter seamless conveying pipe will be furnished complete with all the necessary Dresser or equal, harness type couplings, with shoulder harnesses to prevent separation during pressurization. Conveying pipe will begin at the truck unloading station, and terminate at the pocket elbow. Fill system conveying pipe will be arranged for mounting outside of the bulk storage bin.

2.2.2 Long Radius Elbow: A long radius 4 in. diameter elbow or pocket elbow will be provided and installed in the pneumatic fill line at the factory. This elbow will be of heavy-duty construction to ensure long life while conveying abrasive chemicals.

2.2.3 Inlet Target Box: A heavy-duty inlet target box will be mounted on the storage bin roof flanged connection. Target box will be securely mounted to flange complete with a heavy-duty sealer to insure a dust tight enclosure. Target box will be designed to kill the velocity of the chemical being conveyed and allow it to drop into the storage bin in an even pattern. Target box will be provided with a removable end cap to facilitate cleaning of the fill system.

2.2.4 Pneumatic Fill System Pipe Adapter: A 4 in. brass Kamlock or equal type adapter will be mounted on the fill pipe at the truck unloading station. A brass dust cap and chain will be provided. A slot will be milled in the dust cap to prevent operation of the limit switch while fill system is not in use.

2.2.5 Limit Switch: A limit switch will be mounted on the pipe adapter to provide automatic operation of the bin vent filter, during and after the truck unloading cycle. Limit switch assembly will be adjustable and secured to a heavy-duty mounting bracket for dependable operation. Limit switch will be complete with one set of N.O. and one set of N.C. contacts. Spare contacts will be wired into the unloading control panel to numbered terminal strips for user connection should remote monitoring of filling operation be desirable.

2.2.6 Truck Unloading Control Station: A NEMA 4X control panel will be mounted at the termination of the fill pipe. Panel will be prewired by the system supplier and contain, but not be limited to the following items of equipment: high, low, and intermediate (if required) bin level indicating lights, alarm horn with press to test push button, H-O-A switches for bin vent filter motor(s), an adjustable timer 0-10 minutes for operating bin vent filter mechanical bag shaker.

System will be sequence wired to prevent operation of the exhaust fan and bag shaker at the same time. Numbered terminal strips prewired for possible user connection of bin level alarms and unloading indication will be provided. Necessary nameplates for individual device identification will be provided. Truck unloading station will be premounted and wired at the factory and removed for shipping purposes.

2.3 BIN VENT FILTER:

2.3.1 Bin Vent Filter: One (1) Coffman Systems Model 71-03 bin vent filter will be mounted on the top of the silo, with retained dust discharged directly into storage bin. This unit will have a venting capacity of 1200 SCFM, based on maximum cloth area of 300 square feet. Filter unit will be fabricated for weatherproof and drip-proof construction, with self-contained bag shaker and fan assemblies. Weather and drip-proof gasketed access door to bag compartment will be at least 30 inches square and mounted with adjustable "T" bolt hinges. Access door covers will be bolted in place. All parts of unit subject to service or maintenance, will be not more than five feet above the floor and be accessible by person standing on top of tank without use of ladders or platforms.

2.3.2 Filter Bags: All filter bags must be spring mounted and readily removable for inspection or replacement without tools. Construction of filter will be such that there will be no escape of dust during truck unloading, even if the inspection hatch is open for inspection.

2.3.3 Bag Shaker: An electrically operated mechanical bag shaker will be provided as an integral part of the bin vent filter. It will be operated by a 1/4 HP motor, 230/460 volt, 1725 RPM, and belt driven mechanical oscillator, sealed for life lubrication and enclosed in a weather tight, vandal resistant cover.

2.3.4 Fan: An exhaust fan will be the squirrel cage type, operating at less than 3500 RPM, with mounting on the bin vent filter. This unit will have air handling capacity of at least 1000 SCFM, at 3 inches of water differential. It will provide a negative pressure within the bin during unloading operations, and will be operated by no more than a 2 HP motor, 230/460 volt, TEFC, 3450 RPM. Exhaust section of fan will be fitted with removable bird and insect screen. All electric connections shall be NEMA 3R, rainproof

2.3.5 Disconnect Switches: A disconnect switch in NEMA 3R steel enclosure will be provided and mounted adjacent to each bag shaker and fan motor. Wiring connections to these units will be made at the factory and reconnected in the field by others.

2.4 BIN LEVEL SWITCHES:

2.4.1 Bin Level Switches: Bin level switches will be mounted at a high level and low level of the chemical storage bin mentioned elsewhere in these specifications. These switches will be of the stainless steel rotating paddle type, electrically operated. Indicating lights coincident with these switches will be provided in the pneumatic truck unloading control station. Top mounted unit will have extension shafts and guards. Side mounted units will be provided with inside shields. All bin level switches will be easily accessible. Side mounted units will be located adjacent to storage bin ladders and top mounted units will be easily accessible from bin roof. An audible and/or visual alarm will be actuated when either high or low level bin switch is activated. High and low level switches will activate an extra set of contacts for user direct hook-up, on terminal strips previously mentioned in the pneumatic truck unloading control station, for possible remote monitoring purposes.

2.5 BIN ACTIVATOR:

2.5.1 Electric bin activator: A Coffman Systems Bin Activator Model 63-02 is provided on the transition piece and provides activation of the material in the silo so it will always flow to the feeder. It consists of a double vibrating cone inside of a cone shaped hopper activated by a motor driven vibrator mounted on outside of the activator cone. It is constructed so vibration is transmitted to both the inner cone and the outside shell. The vibrator motor is paced from the rotary feeder drive so that the vibration of the activator is proportional to the feed rate of the material being fed. Electric controls for this unit are provided in the control panel for the feeder and slaker systems. They are adjusted to run the vibrator motor for from 3 to 5 seconds for each 1 cu. ft. of material fed. This operation is proportional to feed rate, which insures flow to the feeder and prevents over vibration, which causes packing of material above the feeder.

2.6 BIN GATE:

2.6.1 Bin Gate: An 8"x 8" Slide type bin gate will be provided between the cone and flexible connection. The bin gate will be manually operated, dust tight, arranged for easy access by plant operators.

2.6.2 Flexible Connection: A suitable flexible connection will be provided between the bin gate and the chemical feeder. Flexible connection will be complete with metal insert to prevent damage to the flexible connection itself.

2.7 LIME FEEDER:

2.7.1 Feeder: One (1) Coffman Systems Model 24-02 volumetric rotary feeder will be provided to feed quicklime at adjustable rates of 0 to 2000 pounds per hour. The feeder will be capable of confining all dust and provide accurate feeding to an accuracy of + / - 2 percent of set point. The feeder will be designed to insure a constant distributed feed of quicklime. The feeder will be of the non-flood type. The feeder drive will be located to provide easy access for maintenance and will consist of a motor and drive mechanism. The rate adjustment will be from the feeder control panel. The controls will be interlocked with the level sensors in the slurry tank and with the lime slaker.

2.7.2 Feeder Drive: Feeder shall be complete with a full wave SCR controlled 4 to 20 ma DC variable speed drive having a 100:1 output range.

2.7.3 Feeder Transfer Screw: A Feeder Transfer Screw Assembly shall be provided to allow for the slaker to be off set within the silo for maximum use of space.

3.0 LIME SLAKER:

3.0.1 General: Coffman Systems Model 41-04 detention type lime slaker system, a combination lime slaking reactor and hydrated lime slurry mixing tank with accessories, as per specifications listed below.

3.0.2 Operating Requirements: The slaker reactor installation will be suitable for continuous or intermittent operation without manual cleaning or servicing when the unit is shut down overnight or over a weekend. It will be capable of slaking commercial pebble quicklime, manufactured and supplied in accordance with AWWA Specification No. B-202-65, size 3/4 inch and fines included. The unit will be capable of slaking at temperatures between 120 and 200 degree F., when operating at rates between 0 to 2000 pounds per hour.

3.0.3 Slaker Reactor: Slaker reactor will be the vertical turbine retention slurry type, providing a minimum retention period of 10 minutes while operating at maximum specified slaking rate. It will be capable of slaking lime in the heavy slurry consistency with automatic, adjustable means for maintaining proper water-to-chemical ratio. Slurry feed from slaker outlet will be quickly responsive to lime feeder set rate to prevent improper treatment due to process lag. The slaking chamber will be arranged for two compartment flow and suitably baffled to prevent short circuiting of lime or water from feed inlet to discharge.

3.0.4 Slaker Reactor Construction: The entire slaker body will be fabricated of at least 10 gauge 316 Stainless Steel. The entire slaker will be insulated on the sides, top cover and bottom with at least 1 inch thick "Celotex" or equivalent insulation. Insulation will be covered and protected from moisture by an 18 gauge stainless steel jacket.

The entire top cover of the slaker will be fabricated of 316 stainless steel and 1 inch of insulation will be seal welded in, so that water cannot enter the insulation. The top cover shall have two (2) handles for lifting.

All inspection covers will be lift-off type hinged covers with locking type slide hinge, making the entire slaker accessible and operable. All covers will be fabricated of stainless steel.

The slaker reactor will be supported on at least four heavy leg supports with suitable stainless steel anchor bolts. The bottom of the slaker and the insulation jacket will be at least 2 inches from the supporting floor, to prevent possible damage to bottom of the slaker due to wet floors or equipment wash down.

3.0.5 Agitator: The gear motor/reducer will be heavy-duty type, high torque rated for a slow speed turbine type mixer. Unit will not exceed 100 RPM. Motor will be a "C" flange motor, 2 HP, 60 Hz., 1725 RPM, 230/460 volts, TEFC and arranged for wall mounting with heavy-duty sleeve coupling on the outside of the top cover. No bearings will be permitted to be in contact with the lime slurry. The mixer will be a vertical shaft turbine type with four bolt-on replaceable stainless steel paddles, arranged for turbulent mixing action in the bottom of the slaking chamber.

3.0.6 Consistency Controls: During normal operation, the slaker motor will be continuously monitored by a motor load control cell mounted in the control panel. Unit will have suitable adjustable load contacts to increase the water to lime ratio if the consistency of the slurry in the slaking compartment exceeds a set value.

If the slaker motor overload is sufficient to trip the magnetic starter, the feeder system will automatically stop and must be restarted by the operator. The electrical system of the entire feeder and slaker unit will be sequence wired to prevent the operation of the lime feeder and water system, unless the slaker motor and grit remover motor are operating.

3.0.7 Temperature Controls: Suitable equipment and temperature controls will be provided so the slaker may be operated at an adjustable temperature between 120 and 200 degree F., regardless of the lime quality and at operating rates between minimum and maximum specified operating rates.

3.0.8 Water Feed Controls: Controls will be provided to automatically pace slaking water at a variable ratio of three to six parts by weight of water to one part by weight of quicklime. The water feed control system will automatically proportion the water to quicklime, regardless of feed rate setting. Slaking water will be metered by a variable area flow meter with a direct reading indicating scale reading in gallons per hour of water feed rate. Pacing system for water feeder will be electrically operated from a contractor mounted on the quicklime feeder.

Changing rate of feed of the lime slaking unit will be accomplished by changing the quicklime feeder rate setter only. No other adjustment will be required of the operator for changes in the rate of feed between minimum and maximum capacity of the slaker.

Water supply to the lime slaker will be filtered city water furnished by others, supplied to the unit through a water supply line. Supply header will be 2 inch pipe with regulated water supply of approximately 50 gallons per minute at 60 PSIG.

3.0.9 Vapor and Dust Control: Slaker will be equipped with a stainless steel dust remover and vapor condenser with a 4 inch inlet tube with 12 inch diameter separator. Tube and cone water jet spray will be inside of slaking compartment. Unit will be bolted in place and easily removable for service. An inspection plate will be provided in slaker cover for inspection and access to spray nozzle. Baffle assembly in separator will be removable for cleaning.

3.0.10 Safety Controls: A separate over-temperature safety switch will be provided on the slaker body and wired to a timer in the control panel to stop the feeder and energize the alarm circuit in the event the slaker temperature exceeds safe operating limits for an adjustable period of 1 to 5 minutes due to a failure of the water supply. An audible and visual alarm with silence push-button will be provided in the control panel to de-energize alarm circuit.

3.1 GRIT REMOVER:

3.1.1 Grit Remover: The slaker will be shipped with an automatic grit separator, complete with a grit washing chamber, slurry dilution fan spray, grit washing jets and screw type grit conveyor, driven by a 1/4 HP, 230/460 volt, TEFC gear motor to convey grit out of the separator. The grit separator will remove approximately 90 percent of all the grit larger than that remaining on a 40 mesh screen while operating at a maximum rated capacity. The grit remover will be capable of removing up to 30 percent by weight of grit if quicklime quality should be temporarily as low as 70 percent available CaO. The slakers installed at the Corkscrew WTP shall have conveyers that discharge outside of the silo.

3.2 LIME SLURRY TANK:

3.2.1 Slurry Tank: A 50 gallon lime slurry tank is built into the Grit Remover. Tank will be constructed of a minimum of 10 gauge stainless steel and will be complete with cover. The slurry tank will be complete with all necessary inlets, outlet overflow connections and will have a mechanical mixer to maintain uniform strength slurry. Motor will be suitably sized. Mixer shaft will be fabricated of stainless steel and have replaceable stainless steel impeller. Slurry tank will be securely mounted to suitable cross beams in the bottom of the storage bin. The slurry tank will not rest on the concrete base.

3.2.2 Level Controls: The slurry tank will be provided with an automatic level control system for maintaining a continuous supply of lime slurry and to shut off the lime slurry feed pumps or controls on low level. Low and high level alarms will also be provided at the control panel.

3.2.3 Slurry Piping: Piping from the slaker reactor will discharge via flexible reinforced hose to the slurry tank. System supplier will coordinate the design of slurry piping system to each point of application for installation by the contractor.

3.3 SYSTEM CONTROL PANELS:

3.3.1 Feeding Control Panel(s): A Stainless Steel NEMA 4X PLC System Control Panel with an aluminum dead front door will be furnished for installation in the feeder and slaker room of the building. The panel will contain all the necessary starters, PLC, I/O modules, etc., required for system operation, and will be constructed per NEC standards.

The control panel will include a PLC with an Operator Interface Terminal to control all necessary functions and provide alarm functions, an Ethernet to TCP/IP adapter module will also be provided. Panel dimensions and general instrument arrangement will be indicated on the drawings. Schematic wiring diagrams shall be submitted to Lee County Utilities for approval prior to fabrication.

Panel Wiring: All internal instrument and component device wiring will be as normally furnished by the manufacturer.

A magnetic circuit breaker and combination motor starter with thermal overload will be provided for each electrical motor. Where control voltages lower than the power supply voltage are required, suitable control power transformers will be furnished, with one secondary lead fused, and the other grounded, with capacity for all simultaneous controls and alarms. The starter will be not less than NEMA Size 1. Device Identification: All devices within the panel will be permanently identified. The device and terminal identifications will agree with those shown on the equipment drawings.

Panel Arrangements (General Design Criteria for all Systems): Panel instruments and control devices will be arranged in a logical configuration from an operator's standpoint. Preliminary arrangement layouts of the front of panels will be submitted for review before panel designs are completed. Control switches will be within 6'0" and 2'0" above floor.

Panel Factory Test: Panel will be factory tested electrically by the panel fabricator before shipment.

4.0 INSPECTION:

4.0.1 QA/QC: The system shall be inspected in accordance with the manufacturers Quality Assurance Program.

4.1 PREPARATION FOR SHIPMENT:

4.1.1 System Pre-wiring: The system shall be pre-wired to the maximum extent possible prior to shipment.

5.0 INSTALLATION:

5.0.1 Lee County shall be responsible for the installation of items.

6.0 DRAWINGS AND SPECIFICATIONS

Coffman will furnish complete sets of engineering drawings and specifications for approval within 3 to 4 weeks from receipt of purchase order. Four Operation and Maintenance manuals with parts lists and a list of recommended spare parts will be furnished upon completion of manufacturing and installation.

7.0 START-UP SERVICE

Coffman will furnish a factory-trained service engineer for system start-up, calibration and instruction briefings for operating personnel for a period of two working days.

8.0 WARRANTY

Full service/parts warranty on complete systems for a period of one year after initial start-up and acceptance is provided but not to exceed 24 months after shipment.

PRICE

OPTION 1

Price for four (4) complete Lime feeding and slaking systems as described above, if delivery of all systems is taken within a six (6) month period.

Four lime slakers, Coffman model 4140THLC as described above: \$271,600.00 (\$67,900.00 ea)

One 100 ton Coffman Systems 100 ton Hi Rise Bulk Storage Silo with appurtenances and as described in this proposal. \$89,200.00 each.

Total Price for the above items: \$360,800.00

OPTION 2

Price for four (4) complete Lime feeding and slaking systems as described above, if delivery of all systems is taken within a twelve (12) month period.

Four lime slakers, Coffman model 4140THLC as described above: \$280,000.00 (\$70,000.00 ea)

One 100 ton Coffman Systems 100 ton Hi Rise Bulk Storage Silo with appurtenances and as described in this proposal. \$91,800.00 each.

Total Price for the above items: \$371,800.00

TAXES: Any applicable Use or Transportation Taxes will be itemized and added to our invoices. Any local permits, as required, will be paid for and acquired by the customer.

TERMS: 20% with approved drawings, 70% upon delivery and final 10% after startup.

DELIVERY: As requested by the owner, but no later than 12 months from the date of the purchase order.

FREIGHT: Delivery to the Green Meadow WTP and the Corkscrew WTP is included.

Sincerely,



Fred Nugent

F. J. Nugent & Associates Inc.

Manufacturer's Agent for Coffman Systems Inc

400 Commerce Way, Suite 112

Longwood, FL 32750

Phone:(407) 831-1199

Fax: 407-831-1195

ATTACHMENT 3

COFFMAN SYSTEMS, INC.

WATER, WASTE & INDUSTRIAL PROCESS EQUIPMENT
SALES - ENGINEERING - SERVICE

QUOTATION

TO: Lee County Environmental Services
1500 Monroe Street
Fort Myers, FL 33902

QUOTATION NO. 20020702R1-Add 1
DATE: July 30, 2002
SUBJECT: LIME SYSTEM

ATTENTION: Sherry Alexander

Fax: 239-689-7390

FROM:

COFFMAN SYSTEMS, INC.
300 Stevens Avenue
Oldsmar, Florida 34677
Ph. (813) 891-1300 Fax (813) 891-1266

LIME FEEDER & SLAKER SYSTEM
ADDENDUM to PROPOSAL dated July 15, 2002

Coffman Systems agrees to the following price commitment.

PRICE

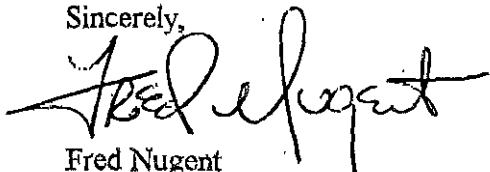
OPTION 1

Four (4) lime slakers, Coffman model 4140THLC
as described in the proposal of July 15, 2002. \$271,600.00 (\$67,900.00 ea)
The slakers are to be ordered and delivered within 6 months from the date of this addendum.

One (1) 100 ton Coffman Systems 100 ton Hi Rise Bulk Storage Silo
with appurtenances and as described in the proposal dated July 15, 2002. \$89,200.00 each.
The silo is to be ordered and released to manufacture within 12 months from the date of this
addendum.

Total Price for the above items: \$360,800.00

Sincerely,



Fred Nugent
F. J. Nugent & Associates Inc.
Manufacturer's Agent for Coffman Systems Inc
400 Commerce Way, Suite 112
Longwood, FL 32750
Phone:(407) 831-1199
Fax: 407-831-1195

PURCHASING AGREEMENT

This Agreement, made and entered into this _____ day of _____, in the year 2002, by and between the LEE COUNTY BOARD OF COUNTY COMMISSIONERS, a political subdivision of the STATE OF FLORIDA, hereinafter referred to as "COUNTY", and **Coffman Systems, Inc. and F.J. Nugent & Associates, Inc.** hereinafter referred to as "VENDOR."

WITNESSTH: That the parties hereto, for the consideration herein set forth mutually agree as follows:

Article 1. **SCOPE OF WORK:** The vendor shall provide all labor, services, materials, and equipment as set forth in the attached "Quotation" and perform all the necessary work in the manner and form as provided therein. [Attachments 1 & 2].

#W-020710, Purchase and delivery of 4 Universal Vertical Lime Slaking Systems and 1 - 100 ton Hi Rise Bulk Storage Silo per vendor quotation and addendum 20020702R1-Add 1

Article 2. **CONTRACT SUM:** The County shall pay to the vendor, for the faithful performance of the terms as specified in the Purchasing Agreement, in lawful money of the United States of America, and subject to the additions and deductions as provided in the Contract Documents, total sum as follows:

Based on the agreed upon price shown in the Quotation previously submitted to the County, a copy of said Quotation being a part of this Agreement the sum of **Three hundred sixty-thousand eight hundred dollars DOLLARS (\$360,800.00)**

Article 3. **PAYMENTS:** If during the progress of the work or furnishing of services it appears that the vendor's bills for the materials and labor are not being paid, the County shall have the right to withhold from the vendor's monthly payments sufficient sums to protect itself against all losses from possible liens, and to apply the said sums to the payment of such debts. Payments of monthly estimates are agreed not to be admission by the County that the work is done or that its quality or quantity is satisfactory; final acceptance shall occur only with final payment. Before the final payment is made, the vendor shall show to the County satisfactory evidence that all just liens or claims for payment from all persons supplying the vendor labor, material and supplies used directly or indirectly by the vendor or any subcontractor or subcontractors of the vendor in the prosecution of the work are fully satisfied, and that there are no liens, claims and demands resulting from the vendor's performance. The County shall have the right to withhold up to ten (10%) percent of each progress payment which shall be due and payable to the vendor upon final completion of the work.

Should the vendor fail to complete the work within the time limit, no partial estimate will be rendered and no payments will be made after the date established for completion except as follows:

1. If a Surety Bond was furnished, the vendor shall deliver to the County's Agent the written consent of the vendor's Surety covering every such partial payment permitting such payment to be made without affecting the validity of the Bond.
2. If a Cash Bond was furnished, the County's Agent will examine the conditions relating to the delay, also the amount and nature of the work remaining to be completed and his decision will determine whether partial payments will continue to be made or withheld.

The validity of the Bond shall in no way be affected regardless of which course of action is taken.

Article 4. This purchasing Agreement shall be in effect from the period commencing the _____ day of August, 2002 up to and including the _____ day of August, 2003. Delivery of the lime slaking systems shall be in accordance with the schedule as set forth in Attachments 1 & 2.

Article 5. **FAILURE TO COMPLETE THE WORK ON TIME:** The time limit for the completion of all work under this Purchasing Agreement shall be as set forth in the Proposal. The dates fixing this period upon the calendar shall be as established and stated in the "NOTICE TO PROCEED" from the Purchasing Agent. After commencement of work for this Agreement, it shall be pushed with proper dispatch toward completion, to the satisfaction of the County and shall be fully completed within the time limit if so established. It is understood and agreed that the time limit for completion of said work is the essence of this agreement and, should the party of the second part fail to complete the work within the time limit, it is agreed that for each calendar day that any work provided for in these plans or specifications shall remain incomplete after the time limit has expired, including any official extension of time limit, the sum per day given in the following schedule shall be deducted from monies due this vendor, not as a penalty, but as liquidated damages and added expense for supervision.

Amount of Liquidated Damages per day: \$75.00 per day past scheduled delivery.

The vendor shall take into account all contingent work which has to be done by other parties, arising from any cause whatsoever, and shall not plead his want or knowledge of said contingent work as an excuse for delay in his work, or for it's nonperformance.

Article 6. **PURCHASING AGREEMENT DOCUMENTS:** The documents hereinafter listed shall form the Purchasing Agreement and they are as fully part of the Purchasing Agreement as if attached hereto:

1. Advertisement for quotes (If Advertising actually performed)

2. Proposal Quote Form
3. Quote Bond (if required)
4. Specifications
5. Insurance Certificate (if required)
6. Vendors Bond (if required)
7. Plans (if applicable)

Article 7. **APPLICABLE LAW:** Unless Otherwise specified, this Purchasing Agreement shall be governed by the laws, rules, and regulations of the State of Florida, or the laws, rules and regulations of the United State when providing services funded by the United State Government.

Article 8. **ASSIGNMENT AND TRANSFER:** The vendor shall not assign or transfer any of its rights, benefits or obligations hereunder, except for transfer that result from transfer or consolidation with a third party, without the prior written approval of the county. The vendor shall have the right to employ other persons and/or firms to serve as subcontractors in connection with the requirements of the Agreement.

Article 9. **TERMINATION:** This Agreement may be terminated by either party by giving thirty (30) calendar days advance written notice. The County reserves the right to accept or not accept a termination notice submitted by the vendor, and no such termination notice submitted by the vendor shall become effective unless and until the vendor is notified in writing by the County of its acceptance.

However, if the vendor is adjudged bankrupt or insolvent, if it makes a general assignment for the benefit of its creditors, if a trustee or receiver is appointed for the vendor or for any of the property, if it files a petition to take advantage of any debtors act or to reorganize under the bankruptcy or similar laws, if it disregards the authority of the County's designated representatives, if it otherwise violates any provisions of this Agreement, or for any other just cause, the County may, without prejudice to any other right or remedy and after giving the vendor seven (7) calendar days written notice, terminate this Agreement.

Where the vendor's services have been terminated by the County, said termination shall not affect any rights of the County against the vendor then existing or which may thereafter accrue.

In the event of termination of this Agreement, not the fault of the vendor, the County shall compensate the vendor for: (1) all services completed prior to the effective date of termination; (2) reimbursable expenses then due; and (3) reasonable expenses incurred by the vendor in effecting the termination of services and work, and incurred by the submittal to the County of project drawings, plans, data, and other project documents which are the subject of this Agreement.

Article 10. **SEVERABILITY:** The provisions and scope of work included in this Agreement are severable. The excuse of nonperformance of a portion of this Agreement shall not excuse the vendor from further performance or completion of the Agreement.

Article 11. **CONFLICTING PROVISION:** Should any provision of this Agreement conflict with any other specifications or provisions included or incorporated by reference, the provisions of this Agreement shall control.

Article 12. **WAIVER:** Any waiver by the County or the breach of any provision of this Agreement shall not be construed or deemed to be a modification of the terms of this Agreement.

Article 13. **MODIFICATION:** Modification to covenants, terms and provisions of the Agreement shall only be valid when issued in writing as an amendment or change order agreed to by both parties.

Article 14. **ILLEGAL OR UNCONSTITUTIONAL PROVISIONS:** Should a Court of Law determine any provision of this Agreement to be contrary to the law, such a ruling shall not relieve the vendor from fulfilling other responsibilities under the Agreement.

Article 15. **DAMAGE TO PRIVATE PROPERTY:** Should any private property not belonging to the vendor be damaged through the fault of the vendor, while carrying out this Agreement, such damage shall be repaired by the vendor prior to the completion of the project. The County shall withhold final payment until such repairs have been made.

Article 16. **INSURANCE:** The vendor will provide a certificate of insurance, meeting the requirements outlined in the specifications (if required).

Article 17. **HOLD HARMLESS AND INDEMNITY:** The vendor agrees through the signing of this document by an authorized party or agent that he shall hold harmless and defend the County of Lee and its agents and employees from all suits and actions, including attorneys' fees and all costs of litigation and judgements of every name and description arising out of or incidental to the performance of this Agreement or work performed thereunder, whether or not due to or caused by negligence of the County excluding only the sole negligence of the County.

Article 18. **EMPLOYEES:** Persons employed by the vendor in the performance of services pursuant to this Purchasing Agreement shall not be considered employees of the County, shall be independent thereof and shall have no claim against the County as to pension, worker compensation, unemployment compensation, insurance, salary, wages or other employee rights or privileges granted by operation of law or by the County to its officers and employees.

Article 19. **LIABILITY FOR ACTS AND OMISSIONS:** The County shall not be deemed to assume any liability for the acts, omissions or negligence of the vendor, its agents or employees, and the vendor shall indemnify, release and hold the county harmless from and shall defend the County and its officers and employees against any

and all claims, demands, liabilities and suits arising from any act or omission of the vendor, his agents or employees performing services and functions pursuant to this Agreement. This Agreement to indemnify shall not apply to any liability for personal injury, property damage, or breach of Agreement caused solely by the negligence of the County.

Article 20. This Agreement embodies the entire understanding of the parties and there are no other agreements or understandings, written or oral, in effect between parties, relating to the subject matter hereof. This instrument may be amended or modified only by an instrument of equal formality signed by the respective parties.

Article 21. **ANTI-DISCRIMINATION CLAUSE:** The vendor hereby agrees to comply with all applicable provisions of Federal, State and local anti-discrimination laws. A list of all pertinent provisions are attached as an addendum, if applicable. The vendor agrees to hold harmless, defend, and indemnify the County for any losses incurred as a result of its failure to abide by the applicable anti-discrimination laws.

Article 22. **SALES AND USE TAX:** The Contractor is responsible for complying with the Florida Sales and Use Tax Law as it may apply to any and all of the Services and Work to be provided and performed pursuant to this Contract. The amount(s) of Compensation set forth in the Contract or in any Change Orders or Work Orders authorized pursuant to this Contract shall be understood and agreed to include any and all Florida Sales and Use Tax payment obligations required by Florida Law of the Contractor and of any an all of the Sub-Contractors or material suppliers engaged by the Contractors pursuant thereto.

IN WITNESS WHEREOF the said Lee County, Florida, has caused this Agreement to be executed in its name by the Chairman, attested by the Clerk of Courts to be hereto attached; and the said party of the second part has caused this Agreement to be executed in its name by its _____ President, attested by its _____ Secretary _____, and has caused the seal of said corporation to be hereunto attached, all on the day and year first above written.

Signed, sealed and delivered
in the presence of:

Secretary

(Correct Name of Corporation)

BY: _____

President

(Corporate Seal)

ATTEST: Clerk of Court
COMMISSIONERS

LEE COUNTY BOARD OF COUNTY
OF LEE COUNTY, FLORIDA

BY: _____
Deputy Clerk

BY: _____
Chairman

APPROVED AS TO FORM

BY: _____
County Attorney's Office

Revised: March 18, 2002