

St. George Island Utility Company, Ltd.

BEFORE THE PUBLIC SERVICE COMMISSION
REGARDING THE APPLICATION FOR INCREASED RATES FOR
ST. GEORGE ISLAND UTILITY COMPANY, LTD.
IN FRANKLIN COUNTY
DOCKET NO.

TESTIMONY OF WAYNE H. COLONEY, P.E., P.L.S.

DOCUMENT NUMBER-DATE

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FPSC-REGULATORY/REPORTING

1 Q. Will you state your name, position and employment
2 address?

3 A. Wayne H. Coloney, P.E., P.L.S., President, Coloney
4 Company Consulting Engineers, Inc., 1014 North Adams
5 Street, Post Office Box 668, Tallahassee, Florida,
6 32302. Telephone: 904/222-8193; Fax 904/222-9824.

7

8 Q. Please provide your qualifications including
9 academic background and professional experience.

10 A. Accompanying this testimony as Exhibit "A" is a
11 copy of my professional experience record, which
12 defines my education, professional work history,
13 professional registration, military service,
14 professional activities, business activities, civic
15 activities, clubs, honors, patents, and published
16 papers. Also accompanying this testimony as Exhibit
17 "B" is an abstract from the current edition of Who's
18 Who in America containing a more detailed biography.
19 With specific reference to this particular project, I
20 have designed, supervised the design, administered
21 construction, analyzed, evaluated, and appraised water
22 systems for public and private utility companies for
23 more than thirty-five (35) years and during this time
24 have had total engineering responsibility for water
25 supply and distribution projects ranging in cost from a

1 few hundreds of thousands of dollars to several
2 millions of dollars.

3

4 **Q. Are you a registered engineer in the state of**
5 **Florida?**

6 A. I am a Registered Professional Engineer in Florida,
7 Georgia, Alabama and North Carolina. In addition, I
8 have been certified to practice in each of the fifty
9 states by the National Council of Examiners for
10 Engineering and Surveying. Further, I am also a
11 Registered Professional Land Surveyor in Florida and
12 Georgia, and a Registered General Contractor in the
13 state of Florida.

14

15 **Q. Are you a member of any professional or technical**
16 **societies?**

17 A. Yes. As set forth in Exhibit "A," I belong to the
18 following, among others, with membership grades noted:

- 19 * Fellow, American Society of Civil Engineers
20 * Fellow, National Academy of Forensic Engineers
21 * Senior Member, National Society of Professional
22 Engineers
23 * Member, Florida Engineering Society
24 * Member, Florida Institute of Consulting
25 Engineers

1 * Member, Florida Society of Professional Land
2 Surveyors

3

4 **Q. What is the subject matter of your testimony?**

5 A. I am prepared to testify as to the used and useful
6 determinations of this rate application, as to the
7 quality of service, and as to the adequacy of the
8 system capacity.

9

10 **Q. Are you familiar with the St. George Island Water
11 System?**

12 A. Yes, I am.

13

14 **Q. When and how did you become familiar with the
15 system?**

16 A. My first contact with the water system occurred in
17 1981 which I was performing other engineering design
18 work on St. George Island; however, I have been
19 actively involved in engineering work related to the
20 water system since 1984 when St. George Island Utility
21 Company, Ltd. retained Coloney Company Consulting
22 Engineers, Inc. to assist in various aspects of water
23 system improvement and expansion including the design,
24 development, and installation of water supply well #2,
25 which came on-line in 1985. Immediately after an

1 outage which occurred on the fourth of July, 1986,
2 Coloney Company was again retained to assist in system
3 management in order to reduce the possibility of
4 subsequent outages. The Coloney Company developed, and
5 St. George Island Utility Company implemented, a series
6 of system management principles which were successful
7 in substantially reducing and ultimately in eliminating
8 outage problems. From 1986 to 1988 Coloney Company
9 provided on-going advice, consultation, management
10 assistance, and engineering design in a continuing
11 effort to upgrade the system and to eliminate
12 deficiencies. In June of 1988 the Coloney Company
13 completed an "ENGINEERING ANALYSIS AND APPRAISAL OF THE
14 ST. GEORGE UTILITY COMPANY, LTD." Following completion
15 of the engineering analysis and appraisal in 1988,
16 Coloney Company assisted St. George Island Utility
17 Company in the design and implementation of a variety
18 of improvements including the construction of a one
19 hundred fifty thousand (150,000) gallon storage tank, a
20 projected third water supply well which has now been
21 built, and a number of other modifications and
22 improvements. Since 1990, Coloney Company has
23 continued to assist St. George Island Utility Company
24 on an "as-needed" basis in cooperation with
25 Baskerville-Donovan, Inc. and other engineering firms.

1 Since January 1, 1992, Coloney Company has provided
2 consulting services under a Retainer Agreement.

3

4 **Q. Would you describe the water plant and the water**
5 **distribution system?**

6 A. The St. George Island water system consists of a
7 three-unit well field, located on the mainland in
8 Eastpoint, Florida, together with the appropriate
9 support, treatment, storage and distribution
10 facilities. Raw water supply for the system is
11 provided by the first two wells, each rated at a design
12 capacity of two hundred fifty (250) gallons per minute
13 (gpm) and by a recently completed third well rated at
14 five hundred (500) gallons per minute (gpm). These
15 wells are manifolded into a transmission main along and
16 in the right of way of the Bryant Patton
17 Bridge/Causeway. The permit application for the third
18 water well (Well Number 3) was prepared and submitted
19 by Baskerville-Donovan, Inc. on behalf of St. George
20 Island Utility Company, Ltd., to the Florida Department
21 of Environmental Regulation (now Protection). The
22 permit was approved and Well Number 3 is now complete
23 as noted above. Water produced from this well field
24 and manifolded into the eight (8) inch transmission
25 main is pumped across the bridge from the mainland to a

1 three hundred thousand (300,000) gallon ground storage
2 tank located on St. George Island at the utility
3 company water treatment plant. From the ground storage
4 tank, water is lifted to a one hundred fifty thousand
5 (150,000) gallon elevated tank. Two of the three wells
6 have a design capacity of two hundred fifty (250) gpm
7 or zero point three six zero (0.360) MGD, maximum daily
8 withdrawal based on twenty-four (24) hour flows. Well
9 Number 3 has an individual pumping rate of
10 approximately five hundred (500) gpm. Well Number 3 is
11 intended to automatically alternate in operation with
12 Wells Number 1 and 2 also to serve as a back-up source
13 of supply. It will provide alternate service with
14 Wells 1 and 2 pumping together at a delivery rate of
15 five hundred (500) gpm. Accordingly, the capacity of
16 the raw water supply system over a twenty-four (24)
17 hour period is approximately zero point seven two zero
18 (0.720) MGD. Well Number 3 is equipped with an
19 emergency generator which will substantially increase
20 system reliability. Well Number 3 and the generator
21 are in place, complete and ready to go into full
22 operation as soon approval is received from the
23 Department of Environmental Protection.

24 Treatment facilities provided by the Utility are
25 located on Gulf Beach Drive and consist of gravity fed

1 tray aeration and chlorination. Storage facilities
2 located at the plant consist of a three hundred
3 thousand (300,000) gallon round storage tank and a one
4 hundred fifty thousand (150,000) gallon elevated
5 storage tank. Gravity feed tray aeration capacity has
6 recently been increased and its present effective
7 capacity exceeds the pumping capacity of the raw water
8 supply element of the system. Finished water is
9 provided by a fifty (50) horsepower, six hundred fifty
10 (650) gpm, primary booster pump, which operates on a
11 pressure range of forty-three (43) to forty-seven (47)
12 PSI as determined by the static water level in the
13 elevated tank which has a height of one hundred fifteen
14 (115) feet (ground to overflow). A smaller, twenty
15 (20) horsepower, two hundred fifty (250) gpm pump is
16 provided as back-up and a stand-by generator with
17 automatic start provides electricity in the event of a
18 power system failure. Treatment of raw water has
19 recently been improved by completion of a dual
20 chlorinator system with individual scales and an alarm
21 system. At the west end of the water distribution
22 piping, a booster chlorinator aids in maintenance of
23 residual chlorine levels.

24

25 **Q. What materials pertaining to this case have you**

1 reviewed?

2 A. The materials which I have studied and reviewed as
3 the basis for formulation of my professional opinion
4 have included, among many other unlisted items, the
5 following:

- 6 * Coloney Company files pertaining to St. George
7 Island Utility Company, Ltd., dating back
8 approximately ten (10) years.
- 9 * The St. George Island Utility Company, Ltd.
10 rate case exhibit for the year ended 31
11 December 1987.
- 12 * The engineering analysis and appraisal of the
13 St. George Island Water System for the St.
14 George Island Utility Company, Ltd., dated
15 June, 1988, as prepared by the Coloney Company.
- 16 * Current (1992 and 1993) correspondence between
17 St. George Island Utility Company, Ltd. and the
18 Department of Environmental
19 Regulation/Protection.
- 20 * The engineer's report, SYSTEM CAPACITY ANALYSIS
21 OF THE ST. GEORGE UTILITY COMPANY, LTD. WATER
22 DISTRIBUTION SYSTEM, prepared by Baskerville-
23 Donovan, Inc. and dated May, 1992 together with
24 addenda thereto.
- 25 * Applicable rules, regulations and statutes.

1 * Docket No. 911082-WS, Staff Recommended Water
2 and Wastewater New and Amended Rules. (not
3 adopted/tabled).

4 **Q. Based on your study and review of these materials**
5 **and your knowledge of these matters, have you formed**
6 **any professional opinions regarding this rate**
7 **application?**

8 A. Yes, I have.

9
10 **Q. Would you please discuss the question of "used and**
11 **useful" percentage with respect to the system as a**
12 **whole?**

13 A. In order to formulate a professional opinion as to
14 "used and useful" percentages for each of the primary
15 accounts and for the system as a whole, I gave careful
16 attention to 367.111(1) Service, which provides that:

17 (1) Each Utility shall provide service to the
18 area described in a certificate of authorization
19 within a reasonable time. If the Commission finds
20 that any Utility has failed to provide service to
21 any person reasonably entitled thereto, or finds
22 that extension of service to any such person could
23 be accomplished only at an unreasonable cost and
24 that addition of the deleted area to that of
25 another Utility company is economical and

1 feasible, it may amend the certificate of
2 authorization to delete the area not served or not
3 properly served by the Utility, OR IT MAY RESCIND
4 CERTIFICATE OF AUTHORIZATION. If utility service
5 has not been provided to any part of the area
6 Utility is authorized to serve, whether or not
7 there has been a demand for such service, within
8 five (5) years after the date of authorization for
9 service to such part, such authorization may be
10 reviewed and amended or revoked by the Commission
11 beginning with such authorization.

12 (2) EACH UTILITY SHALL PROVIDE TO EACH PERSON
13 REASONABLY ENTITLED THERETO SAFE, EFFICIENT, AND
14 SUFFICIENT SERVICE AS IS PRESCRIBED BY THE FLORIDA
15 SAFE DRINKING WATER ACT, THE FLORIDA AIR AND WATER
16 POLLUTION CONTROL ACT, OR RULES ADOPTED PURSUANT
17 THERETO. (Emphasis added.)

18 Although the Staff Recommended Water and
19 Wastewater New and Amended Rules have been tabled
20 by the Commission and have not been adopted, these
21 proposed rules provide additional, and highly
22 rational, guidelines for the determination of
23 "Used and Useful" percentages.

24 Of very considerable importance in the
25 formulation of my professional opinions was the

1 question of "Developer Owned" or "Developer
2 Controlled" customer areas. The existing number
3 of connected ERU's, the actual capacity of raw
4 water supply and treatment facilities, the extent
5 of the water distribution system, and the
6 development pattern were also given consideration.
7 Finally, great importance was attached to the
8 question as to whether or not the Utility's
9 investment was prudently incurred in order to meet
10 its statutory obligations.

11

12 **Q. Would you discuss the "used and useful" percentage**
13 **of wells numbers 1 and 2?**

14 **A.** Wells numbers 1 and 2 each have an independent
15 design capacity of two hundred fifty (250) gpm. Well
16 Number 3 which is now complete and soon to come on line
17 has a capacity of five hundred (500) gpm. The St.
18 George Island Hydraulic Analysis performed by the
19 Florida Rural Water Association (FRWA) in May of 1992
20 determined that Wells Numbers 1 and 2 running together
21 were averaging a total of four hundred ten (410) gpm.
22 Well Number 1, pumping independently, averaged two
23 hundred fifty-five (255) gallons per minute, while Well
24 Number 2, when pumping independently, averaged three
25 hundred ten (310) gpm. A letter from the Florida

1 Department of Environmental Regulation (now Protection)
2 addressed to St. George Island Utility Company, Ltd.,
3 dated 5 June 1992 and signed by J. A. Kintz, P.E.,
4 Potable Water Section Supervisor, addressed the
5 question of the Florida Rural Water Association Flow
6 Tests and requested that Baskerville-Donovan, Inc.
7 incorporate these "real world" data into their
8 engineering report. On 10 June, 1992, Baskerville-
9 Donovan, Inc. responded to the foregoing referenced
10 letter from Mr. Kintz. The essence of their
11 investigations was the determination that the existing
12 raw water supply is capable of providing a sufficient
13 quantity of water to the system, when taking into
14 account available storage capacity, in order to serve
15 the one thousand two hundred sixty-four (1,264)
16 existing ERU's plus an additional one hundred thirty
17 (130) ERU's or approximately two (2) years growth for a
18 total of one thousand three hundred ninety-four (1,394)
19 ERC's. This would indicate a capacity to meet the
20 existing demand of twelve hundred sixty-four (1,264)
21 ERU's plus the capacity to provide a margin of reserve
22 equal to one hundred thirty (130) ERU's or ten point
23 twenty-eight (10.28) percent. These determinations
24 were based on the capacities of Wells Numbers 1 and 2
25 only. When Well Number 3 comes on line, the system

1 capacity will increase significantly.

2

3 **Q. Based on the foregoing, do you have a professional**
4 **opinion as to the "used and useful" percentage for**
5 **Wells Numbers 1 and 2?**

6 A. Yes, I have. The "used and useful" percentage of
7 Wells Numbers 1 and 2 is one hundred (100) percent.

8

9 **Q. Would you discuss the "used and useful" percentage**
10 **for well number three?**

11 A. Construction and installation of Well Number 3 was
12 mandated by the Florida Department of Environmental
13 Regulation (now Protection) and was contemplated as a
14 back-up to provide service in the event of failure of
15 either or both Wells Numbers 1 and 2. Considering the
16 absolute necessity for back-up capacity combined with
17 the fact that the construction of this well was
18 mandated by the Florida Department of Environmental
19 Regulation, it must be recognized that the investment
20 in Well Number 3 is and has been prudently incurred.

21

22 **Q. Based on the foregoing, have you formulated a**
23 **professional opinion as to the "used and useful"**
24 **percentage for Well Number 3?**

25 A. Yes, I have. The "used and useful" percentage for

1 Well Number 3 is one hundred (100) percent.

2

3 **Q. Would you discuss the "used and useful" percentage**
4 **for Wells Numbers 1, 2 and 3 as a combined source of**
5 **raw water supply?**

6 A. The redundancy requirements of Rule 17-555.315(1)
7 F.A.A. mandate that raw water supply capacity must be
8 sufficient to meet system demand with the largest of
9 the supply wells out of service. Only by construction
10 of Well Number 3 can this requirement be met. Further,
11 DEP mandated construction of Well Number 3 as a back-
12 up. Accordingly, all three wells combined constitute
13 the minimum raw water supply package necessary to
14 provide adequate and reliable service.

15

16 **Q. Based on the foregoing, have you formulated a**
17 **professional opinion as to the "used and useful"**
18 **percentage for wells numbers 1, 2 and 3?**

19 A. Yes, I have. The "used and "useful" percentage for
20 Wells Numbers 1, 2 and 3 is one hundred (100) percent.

21

22 **Q. Would you discuss the "used and useful" percentage**
23 **for the elevated tank?**

24 A. Construction of the elevated tank was mandated by
25 both the DER (now DEP) and the PSC (Order Number 21122)

1 as being necessary to provide adequate service and the
2 tank is therefore one hundred (100) percent "used and
3 useful" regardless of any capacity calculations. Based
4 on determinations of both the Florida Department of
5 Environmental Protection and Baskerville-Donovan, Inc.,
6 the elevated storage tank, when combined with the
7 previously existing three hundred thousand (300,000)
8 gallon ground storage tank, has the capacity to serve
9 the one thousand two hundred sixty-four (1,264)
10 existing ERU's plus an additional one hundred thirty
11 (130) ERU's for a total of one thousand three hundred
12 ninety-four (1,394) ERU's indicating a margin of
13 reserve of ten point twenty-eight (10.28) percent. In
14 its report, dated May, 1992, Baskerville-Donovan
15 recommends the installation of an altitude valve to
16 isolate the existing elevated tank during peak flows
17 and also modification of existing pump controls in
18 order to allow parallel operation of the larger and
19 smaller booster pumps at the treatment plant. This is
20 intended to provide a capacity to serve on thousand
21 four hundred twenty-one (1,421) ERU's if assumed
22 development occurs together with five (5) percent ERU
23 growth throughout the system. This growth would, of
24 course, include the currently existing ten point
25 twenty-eight (10.28) percent margin of reserve of one

1 hundred thirty (130) ERU's.

2

3 **Q. Based on the foregoing, have you formulated a**
4 **professional opinion as to the "used and useful"**
5 **percentage for the elevated tank?**

6 A. Yes, I have. Based on the foregoing, it is my
7 professional opinion that the elevated storage tank,
8 both before and after installation of the altitude
9 valve and accompanying modifications, is one hundred
10 (100) percent "used and useful."

11

12 **Q. Would you discuss the "used and useful" percentage**
13 **of the supply mains?**

14 A. Inasmuch as the supply mains were installed to
15 serve the areas described in the Certificate of
16 Authorization under which St. George Island Utility
17 Company, Ltd. operates and since customers having a
18 right to be served are scattered throughout the entire
19 area described in such certificate, it is clear that
20 the construction of these mains represents an
21 investment prudently incurred.

22

23 **Q. Based on the foregoing, have you formulated a**
24 **professional opinion as to the "used and useful"**
25 **percentage of the supply mains?**

1 A. Yes, I have. Based on the foregoing, it is my
2 professional opinion that the supply mains are one
3 hundred (100) percent "used and useful."
4

5 **Q. Would you discuss the "used and useful" percentage**
6 **of the transmission and distribution system installed**
7 **within the plantation area?**

8 A. 367.111(1) states that:

9 "Each Utility shall provide service to the area
10 described in a Certificate of Authorization within a
11 reasonable time. If the Commission finds that any
12 Utility has failed to provide service to any person
13 reasonably entitled thereto, or finds that extension of
14 service to any such person could be accomplished only
15 at an unreasonable cost and that addition of the
16 deleted area to that of another Utility company is
17 economical and feasible, it may amend the certificate
18 of authorization to delete the area not served or not
19 properly served by the Utility, OR IT MAY RESCIND
20 CERTIFICATE OF AUTHORIZATION. If utility service has
21 not been provided to any part of the area Utility is
22 authorized to serve, whether or not there has been a
23 demand for such service, within five (5) years after
24 the date of authorization for service to such part,
25 such authorization may be reviewed and amended or

1 revoked by the Commission beginning with such
2 authorization.

3 (2) EACH UTILITY SHALL PROVIDE TO EACH PERSON
4 REASONABLY ENTITLED THERETO SAFE, EFFICIENT AND
5 SUFFICIENT SERVICE AS IS PRESCRIBED BY THE FLORIDA SAFE
6 DRINKING WATER ACT, THE FLORIDA AIR AND WATER POLLUTION
7 CONTROL ACT, OR RULES ADOPTED PURSUANT THERETO,"
8 (Emphasis added.)

9 The area described in the Certificate of
10 Authorization is specifically divided into two (2)
11 separate segments: one within the "Plantation" and the
12 second consisting of the rest of the Island.

13 Giving first consideration to the area within the
14 "Plantation," it should be noted that, at one time, the
15 "Plantation" was directly under developer control and,
16 as a result, at that time the question of "used and
17 useful" may have depended upon the ratio of lots
18 connected to lots with service available; however,
19 since 1986, no portion of the "Plantation" has been
20 subject to control by St. George Island Utility
21 Company, Ltd. nor by any of its officers, partners, or
22 employees, and as such, the Plantation is not now a
23 "developer controlled" area. Neither the St. George
24 Island Utility Company nor any of its officers or
25 owners has any means of controlling growth within the

1 "Plantation" or elsewhere.

2

3 **Q. Based on the foregoing, have you formulated a**
4 **professional opinion as to the "used and useful"**
5 **percentage of the transmission and distribution system**
6 **installed within the Plantation area?**

7 A. Yes, I have. Based on the foregoing, and taking
8 into consideration the fact that the Plantation is
9 clearly and definitively beyond the control of St.
10 George Island Utility Company, Ltd. or any of its
11 officers or owners, and giving further consideration to
12 the fact that the Utility Company is required by the
13 Florida Public Service Commission to provide water
14 service to any customer within the "Plantation" who
15 requests service, then it is my professional opinion
16 that the transmission and distribution system within
17 the "Plantation" area of St. George Island is one
18 hundred (100) percent "used and useful."

19

20 **Q. Would you discuss the "used and useful" percentage**
21 **of the transmission and distribution system of the rest**
22 **of the Island?**

23 A. Throughout the rest of St. George Island outside
24 the "Plantation" area, no officer, employee or
25 affiliate of the Utility Company has ever had anything

1 to do with the development and platting of lots or
2 parcels. The development pattern throughout the rest
3 of the Island is not controlled nor is it subject to
4 related developer control by the Utility Company in any
5 shape, manner, or form. The Commission Rule requires
6 provision of service to the whole territory included
7 within the area described in its Certificate of
8 Authorization and customers have built residences and
9 structures **AT RANDOM** throughout the entire certificate
10 area necessitating construction of transmission and
11 distribution lines throughout this area in order to
12 provide service when and where requested. More than
13 one hundred twenty (120) potential customers are now
14 served by privately owned shallow wells. Since
15 transmission and distribution lines must be run past
16 such lots with shallow wells regardless of whether or
17 not they are connected to the system, it is further
18 indication that construction of such transmission and
19 distribution lines were mandated by the Public Service
20 Commission and were a prudently incurred investment.

21

22 **Q. Based on the foregoing, have you formed a**
23 **professional opinion as to the "used and useful"**
24 **percentage of the transmission and distribution system**
25 **on the rest of the Island?**

1 A. Yes, I have. Based on the foregoing, it is my
2 professional opinion that the transmission and
3 distribution system outside of the "Plantation" and
4 throughout the balance of St. George Island is one
5 hundred (100) percent "used and useful."

6

7 Q. Do you have an opinion as to the "used and useful"
8 percentage applicable to the entire water system, taken
9 as a whole, owned and operated by St. George Island
10 Utility Company, Ltd.?

11 A. Yes, I have. Based on the foregoing, the total
12 water system in its entirety is one hundred (100)
13 percent "used and useful."

14

15 Q. Would you discuss the quality of service currently
16 being provided to customers of the water system owned
17 and operated by St. George Island Utility Company,
18 Ltd.?

19 A. Based on my personal observations, my detailed
20 knowledge of the water system, and on information
21 provided to me by Baskerville-Donovan, the Florida
22 Department of Environmental Regulation (now
23 Protection), and the Utility company itself, there have
24 been no outages in recent years even during such peak
25 periods as Memorial Day weekend and the Fourth of July.

1 In recent months, very few billing complaints have been
2 received and customer response indicates general
3 satisfaction with the quality of service. Since the
4 last rate case there have enormous and substantive
5 improvements to the reliability and quality of service.
6 The addition of the 150,000 gallon elevated storage
7 tank provides longer service capacity in the event of
8 power or well outages and maintains delivery pressure
9 even with pump outages. Well Number 3 provides
10 increased raw water supply capacity and significantly
11 increases reliability. The added chlorine booster
12 station at the west end, the repair of aeration plant
13 screening and addition of trays to improve hydrogen
14 sulfide removal, automatic operation of the standby
15 generator for high service pumps and addition of an
16 automatic start generator for the new well, a regular
17 flushing program, detection and repair of leaks,
18 regular testing for chlorine residuals and hydrogen
19 sulfide, regular testing for system pressure,
20 employment of a certified and competent plant manager,
21 maintenance of a cross connection prevention program,
22 fencing and security at plant and wells, availability
23 of emergency numbers 24 hours a day all have vastly
24 increased reliability and quality of service. Based on
25 the foregoing, it is my professional opinion that the

1 qualify of service provided by St. George Island
2 Utility Company, Ltd. to customers of its water system
3 is, indeed, satisfactory and acceptable.

4

5 Q. Would you discuss adequacy of capacity?

6 A. During my prior testimony concerning the "used and
7 useful" percentages in primary accounts, I addressed
8 the adequacy of capacity of the wells and pumping
9 plant, elevated tank and related storage capacity, the
10 supply main, the bridge crossing, and the transmission
11 and distribution system. Amplifying these comments
12 with information based on determinations set forth by
13 Baskerville-Donovan, Inc. in their report dated May,
14 1992, it appears that the system with relative
15 modifications and improvements, including Well Number
16 3, has adequate capacity to serve existing and
17 projected growth through the current year. From 1995
18 to 1998 it is projected that an additional fifty
19 thousand (50,000) gallon ground storage tank and
20 booster pumps will increase the capacity of the system
21 to serve a total of one thousand nine hundred seventeen
22 (1,917) ERU's. In the period 1999 to 2002,
23 construction of a new elevated storage tank near
24 Windjammer Village will increase the capacity of the
25 system to meet projected growth and will enable it to

1 serve two thousand one hundred ninety-seven (2,197)
2 ERU's.

3 In short, it is my professional opinion that the
4 system as it presently exists, given modifications and
5 improvements which are within the ability of the
6 company to provide, has adequate and sufficient
7 capacity to serve its existing customers and those
8 projected to be added through the year 2002.

9

10 **Q. Does that conclude your testimony.**

11 **A. Yes, it does.**

EXHIBIT A
to
Testimony of Wayne H. Coloney, P.E., P.L.S.
PSC Docket No.

WAYNE H. COLONEY, P.E., P.L.S., R.G.C.
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1014 North Adams Street
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Tallahassee, Florida 32302
Telephone: (904) 222-8193 Telefax: (904) 222-9824

PERSONAL

Birthplace: Bradenton, Manatee County, Florida;
Married; One Daughter: U.S. Citizen.

EDUCATION

Texas A & M--Major: Electrical Engineering; Degree: None
Georgia Institute of Technology--Major: Civil Engineering;
Minor: Mechanical Engineering; Degree: BCE (With Highest
Honor/Summa Cum Laude, Four year, 4.0 GPA)

**PROFESSIONAL
EXPERIENCE
PRESENT**

President, Coloney Company Consulting Engineers, Inc.,
Tallahassee, Florida

Principal, Coloney Von Soosten & Associates Inc.,
Tallahassee, Florida

**PROFESSIONAL
EXPERIENCE
PAST**

Deputy Chairman, Howden Airdynamics America, Tallahassee, Florida

Director, Vice President, Howden Coloney Incorporated, Designers
and Manufacturers, Tallahassee, Florida

President, Wayne H. Coloney Company, Inc., Designers
and Manufacturers, Tallahassee, Florida

President, Wayne H. Coloney Company, Inc., Consulting Engineers,
Tallahassee, Florida

Partner, Barrett, Daffin & Coloney,
Tallahassee, Florida

Partner, Barrett, Daffin, Bishop & Coloney,
Tallahassee, Florida

Associate, J.E. Greiner Company,
Tampa, Florida

Chief Engineer-Highways, Gibbs & Hill, Inc.,
Tampa, Florida

Engineer-Highways, Gibbs & Hill, Inc.,
Guatemala, Central America

Assistant State Engineer of Drainage, Florida State Road Department,
Tallahassee, Florida

Project Engineer, Instrument man, Heavy Equipment Operator,
Constructora General, S.A., Venezuela, South America

**PROFESSIONAL
REGISTRATION**

Professional Engineer (P.E.) - Florida Certificate No. 4234
Professional Engineer (P.E.) - North Carolina Certificate No. 5719
Professional Engineer (P.E.) - Alabama Certificate No. 10673
Professional Engineer (P.E.) - Georgia Certificate No. 3998
Professional Land Surveyor (P.L.S.) - Florida Certificate No. 1072
Professional Land Surveyor (P.L.S.) - Georgia Certificate No. 1145'
Certified Fallout Shelter Analyst No. 3TT-996-66
The National Council of Examiners for Engineering
and Surveying - Certificate No. 3927
Registered General Contractor(R.G.C.)- Florida File No. RG00212479

**MILITARY
SERVICE**

Sergeant, Tank Commander, U.S. Army, Company "C", 714th Tank
Battalion, 12th Armored Division, Three Battle Stars, Serial Number
38462946, Honorable Discharge

**PROFESSIONAL
ACTIVITIES
PRESENT**

Fellow, American Society of Civil Engineers
Fellow, National Academy of Forensic Engineers
Associate Member, American Society of Safety Engineers
Member, National Society of Professional Engineers
Member, Florida Engineering Society
Member, Florida Institute of Consulting Engineers
Member, Florida Society of Professional Land Surveyors
Member, Turnaround Management Association
Member, American Defense Preparedness Association
Member, American Arbitration Association
Member, Tau Beta Pi, Phi Kappa Phi, Chi Epsilon, ANAK,
Omicron Delta Kappa, Koseme Society, Phi Eta Sigma,
Pi Delta Epsilon

**PROFESSIONAL
ACTIVITIES
PAST**

Member, Advisory Council on Military Education (Appointed by
the Governor, State of Florida)
Member, President's Advisory Committee on Industrial Innovation
(Appointed by the President of the United States)
Member, White House Conference on Small Business
Member, Water Pollution Control Federation
Member, American Security Council
Member, Society of American Military Engineers
Member, Surveying and Mapping Society of Georgia
Member, Construction Specifications Institute

**BUSINESS
ACTIVITIES
PRESENT**

Member, Board of Directors, GTO, Inc.

**BUSINESS
ACTIVITIES
PAST**

President, Professional Management Consulting Group, Inc.
President, Florida Small Business Association
President and Secretary, Tesseract Corporation
President, Director, International Enterprises, Inc.
President, Retrotech Corporation
Member, American Marketing Association

**CIVIC
ACTIVITIES
PRESENT**

Member, Governor's Commission for Purchase from the Blind or Other Severely Handicapped (Appointed by the Governor, approved by the Senate; State of Florida)
Member, Tallahassee Chamber of Commerce; Past Director
Member, Tallahassee 100 Club
Member, LeMoyne Art Foundation; Past Director; Vice President
Member, Springtime Tallahassee; Past Director; President; Chief, Krewe of War and Reconstruction; Brigadier General, Andrew Jackson's Staff
Founding Member, Florida Heritage Foundation; Past Director; President
Founding Member, Colonels of Tallahassee
Member, Capital Tiger Bay Club
Member, American Legion
Member, Air Force Association
Member, Tallahassee 100 Club

**CIVIC
ACTIVITIES
PAST**

Member, Tallahassee - Popayan Friendship Commission
Member, Advisory Committee for Historic and Cultural Preservation (Appointed by the Governor, State of Florida)
Director, Kappa Delta Sorority House Corporation
Member, FSU Admissions Selection Committee
Member, WFSU-TV Community Advisory Board
Member, Florida State Chamber of Commerce
Member, Governor's Energy Research Task Force (Appointed by the Governor, State of Florida)
Member, Governor's Small Business Advisory Council (Appointed by the Governor, State of Florida)
Chairman, Area Vocational Technical School Advisory Committee
Member, Tallahassee Kiwanis Club
Member, Metropolitan Dinner Club; Past Director; Secretary; Vice President; President
Director, United Fund and Community Council of Leon County; Past President
Director, Goodwill Industries - Big Bend
Member, Florida Trust for Historic Preservation

CLUBS

Governors Club
Killearn Golf and Country Club

HONORS

Regional Small Business Person of the Year, Southeast U.S.
Florida Small Business Person of the Year
Citation of Excellence in the Water Pollution Control Field
Jimmy Doolittle Fellow, Aerospace Education Foundation

BIOGRAPHICAL LISTINGS

"Who's Who in America"
"Who's Who in Finance and Industry"
"Who's Who in the World"
"Who's Who in the South and Southwest"
"Who's Who in Engineering"
"Who's Who in Science and Engineering"
"Who's Who in Ecology"

PATENTS

Roof Framing System With Adjustable Brackets
*Tile Mounting Structure
*Curler Rotating Device
*Bracket System for Roof Framing
Dense Packing External Aircraft Fuel Tank

*With C.W. Tracy

PAPERS

"Spray Irrigation As a Disposal Method for Sewage Treatment Plant Effluent"
"Factors to be Considered in the Utilization of Spray Irrigation"
"Design Criteria For Spray Irrigation Fields"
"Drainage and Erosion Control"
"Flood Relief at Phillippi Creek"
"Rainfall Intensity - Duration - Frequency Curves"
"Application of Dried Bacteria Cultures in Oily Waste Treatment"
"The Semi Automated Assembly of 30mm Armor Piercing Incendiary Projectiles"
"The Design and Development of the GFU-7/E Ammunition Loading System"
"Advanced Concepts for Packaging and Handling Munitions"
"Munitions Ground Support for the A-10 Aircraft"
"Design Concepts for Robotic Ammunition Resupply for the 155mm Self Propelled Howitzer"
"Design Concepts for a Semi Autonomous Mobile System for Ordnance Neutralization"
"Design Concepts for a Remote Controlled Robotic Monitoring System"
"An Igloo Munitions Handling System"
"Modular Ammunition Package and Feed System for Attack Helicopters"
"Design and Development of an Artillery Resupply Module"
"Design and Development of an Advanced COMBAT Telescoped Ammunition Supply System"
"30mm Ammunition Processing Equipment"
"Design Defects in Heavy Construction Equipment"
"The Forensic Engineer's Role in Eminent Domain Valuation Disputes"
"Background Activities and General Procedures - Litigation Support by the Forensic Engineer"

RELIGION

Episcopalian, St. John's Episcopal Church

EXHIBIT B
to
Testimony of Wayne H. Coloney, P.E., P.L.S.
PSC Docket No.

Who'sWho **in America**[®]

46th edition
1990-91
Volume 1

MARQUIS
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1977, cum on med adm 1984-). Iowa Hoop Ave (chmn hd trustee 1977-78, trustee 1978-), nominating com 1981-), Am Iowa Hoop Planning Assn Am Mid Critics (chmn 1981-87, chmn 1987-88), Johnson County (Hoop) Sec. U. Iowa Alumni Assn, Carson Colliery, Chgo. Bldg. Home, 314 W. Adams, Chgo. 60606, Office of Iowa Hoop & Chmn Office of the Div 650 Northern Rd Iowa City IA 52242

COLMAN, JOHN CHARLES, inventor, consultant; b. Chgo., Jan. 27, 1927; a. Charles Carl and Mary Pauline (Frederick) C.; m. Joan Kate Better, Feb. 19, 1954; children: James A., David L., Nancy L. B.Chem. Engrng., Cornell U., 1949; M.B.A., Harvard U., 1951. With Arthur D. Little, Inc., Cambridge, Mass., 1951-52; chem. div. Borden Co., Pasadena and Lancaster, Mass., 1952-54; v.p. dir. A.G. Becker & Co. Chgo., 1954-64; dir. Office Internal Mgmt. Affairs, Dept. State, 1964-68; dep. asst. sec. Dept. Treasury, 1968-69; exec. v.p. Continental Int. Corp., Chgo., 1969-75; chmn. bd. Beehive, Inc., Bensenville, Ill., 1981-84; dir. Am. Equity Investors, Inc., Washington, Baltimore Researches, Inc., Pa., Tex., DRA Systems, Inc., Melbourne, Fla., Duplex Products Inc., Syracuse, Ill., Crown Capital Corp., N.Y.C., Premier Indul. Corp., Cleve., Eycort One Corp., Mpls., United St. Assurance Co., Melbourne, Fla.; v. faculty mem. Harvard Bus. Sch., Boston, 1966; dir. Am. Jewish Joint Distrib. Com., N.Y.C.; Child Welfare League Am., N.Y.C.; Chapin Hall Ctr. for Children, Chgo., Ill.; Jewish Fedn. Met. Chgo., Brandeis Inst., Ontonagon, Wisconsin; vol. dir. and pres. Jewish Children's Bldg., Chgo., 1979-82; mem. v. com. Div. Sch., U. Chgo. Served with USNR, 1945-46. Club: Mid-day (Chgo.).

COLMAN, ROBERT WOLF, physician, medical adviser; b. N.Y.C., June 7, 1935; a. Jack K. and Miriam (Gowland) B.; m. Barbara Fishman, June 14, 1970; children: Sharon, David. AB summa cum laude, Harvard U., 1956, MD cum laude, 1960. Intern. Boston City Hosp., 1960-61; resident Beth Israel, Brookline, Mass., 1961-62; clin. assoc. USPHS, NIH, 1962-64; resident Barnes Hosp., St. Louis, 1964-65; fellow in hematology, 1965-67; assoc. in medicine Harvard Med. Sch., Cambridge, Mass., 1967-69; asst. prof., 1969-73; asst. prof., 1973; asst. prof. U. Pa., Phila., 1973-77; prof. medicine, 1977-78; prof. medicine Temple U. Sch. Medicine, Phila., 1978-; prof. thrombosis, 1981-; prof. pathology, 1982-; asst. thrombosis Res. Ctr., 1979-; Sci. Study prof. of medicine, 1982-; mem. hematology Res. Ctr., 1979-; NIH, Bethesda, Md., 1977-81; invited lect. Gordon conf., Internat. Congress Hemostasis and Thrombosis, Fedn. Am. Soc. Exptl. Biology meetings, Internat. Sci. Kaffirwan and Kinsin, others. Coauthor, numerous papers in prof. pub., 1959-; editor: Hemostasis and Thrombosis, 1982, 2d ed., 1987; editor: Platelet Jour., 1989-; mem. editorial bd. Ann. Clin. Investigation, Blood, Proc. Soc. Exptl. Biology, Thrombosis Res., 1980-88. Surgeon USPHS, 1962-64. Recipient Lemuel Reese prize Harvard U. Career Devl award NIH, Fellow ACP, mem. Am. Assn. Physicians, Am. Soc. Clin. Investigation, Am. Soc. Rheumatology and Molecular Biology, Internat. Sci. Hemostasis and Thrombosis (conductor 1989-), Perinatal Club, Internat. Clin. Club, Phi Beta Kappa, Sigma Xi, Alpha Omega Alpha. Office: Temple U. Sch. Medicine 3400 N Broad St Philadelphia PA 19140

COLTON, WILLIAM LYNDON, dredging company executive; b. Chgo., Oct. 28, 1928; a. Philip Norman and Leah (Lydon) C.; m. Pauline Grace Carey, May 3, 1928; children: Jean, Philip, Carey, Paul, B.A., Harvard U., 1949; M.B.A., U. Chgo., 1952; postgrad. MIT, Civil. Sch. Mines. Field engr., estimator Great Lakes Dredge and Dock Co., Chgo., 1950-61; asst. in pres., 1961-63; chief engr., v.p., 1963-71; v.p., 1971-75; exec. v.p. Great Lakes Dredge and Dock Co., Oak Brook, Ill., 1975-80; pres., chief exec., 1980-; dir. Great Lakes Internat. Mem. Nat. Assn. Dredging Contractors, Internat. Assn. Dredging Contractors (dir. 1966-). Roman Catholic.

COLTON, EDWIN IRVING, airline executive; b. Burlington, Vt., June 7, 1926; a. Myer and Lena (Vell) C.; m. Nancy Thornell, Dec. 11, 1965; children: Elizabeth, M.B., U. Chgo., 1948; U. Rochester, 1948; L.J.B., Harvard, 1951. B.S., N.Y. 1951; D. 1958. With USAF, 1941-45; with USAF, 1945-52; CAR, 1954-57; with Allegheny Airlines, Inc. (now USAir, Inc.), 1947-; exec. v.p. mktg. and legal affairs, 1964-75; pres. Allegheny Airlines, Inc. (now USAir, Inc.), 1975-80; chief exec. officer, 1975-; chmn. bd. dir., 1978-; also chmn. pres. USAir Group Inc.; bd. dir. PNC Fin. Corp., Martin Marietta Corp., dir. Martin Marietta Corp.; mem. bd. trustees U. Rochester. Served to Ist H. AUS, 1952-54. Recipient James D. McGill Award U. Rochester. Mem. ABA, U.S.C. (bd. dir.), U. Rochester (bd. trustee).

COLTON, ROBERT GABRIEL, educator; b. Phoenix, Aug. 5, 1915; a. Louise (Oman) Pauline (Oman) C.; m. Dorothy Ann, June 15, 1944; 1946; 1950; 1950; m. Robert Richard and Margaret Simon-Yaeger, Dec. 10, 1946; Ph.D., U. Calif., Berkeley, 1940; Rich. asst. inst. for Philos. Research, 1943-55; asst. prof. history San Francisco State Coll., 1956; assoc. prof. U. Kans., 1957-59; assoc. prof. U. Pitts., 1959-67; prof. history of sci and European history, 1967-80; prof. emeritus, 1984-; Author: Struggle for Madrid, 1939, Spain: The Glory and the Tragedy, 1971; Editor: Philosophy of Science Series, U. Pitts., 1961-67; editor Science Series, in The Laboratory of Language: The Facts of Science, Reprints of the Unconquered, Space Time and Reality, 1974-82; Death in the Olive Groves: The Lincoln Brigade in the Spanish Civil War, 1988, omnib. Our Fight, Writings of Veterans of the Abraham Lincoln Brigade Spain, 1987; bd. gov. Abraham Lincoln Brigade Archives, 1983-; bd. editors Science and Society, 1984-; Served with AUS, 1941-45. Decorated Army Commendation medal, recipient Hans Reiser award German Democratic Republic, 1970. Mem. Am. Hist. Assn., History of Sci. Soc., N.Y. Acad. Sci., Sigma XI. Home: 225 Capital Dr Pittsburgh PA 15236

COLONNO, FURIO MARCO, corporate executive; b. Chailern, Piedmont, Italy, Jan. 1, 1931; came to US 1976; a. Giuseppina Giovanni and Ottavia (Scalco) C.; m. Alice Jean Orsman, Aug. 15, 1969; 1 child, David. Dr. Law, U. Toron., Italy, 1954; U. Toron., Italy, 1955-64; dir. cultural programs RAI-Italian Radio-TV, Rome, 1965-76; chief lang. of comm. communications U. Bologna, Italy, 1970-77; v.p. corp. affairs FIAT USA, Inc., N.Y.C., 1977-83; pres. FIAT USA, Inc., 1983-84; chmn., 1984-; Transfield lect. Yale U., 1984; chmn. bd. dir. Fabbri Pub. Group, 1989; editor Comunicazioni Viva, U. Bologna, Italy, 1970-77; Comunicazioni di Monza, Segreco Publ. Milan, Italy, 1979-84; contig. edit. La Stampa Daily, Turin, Italy, 1970-; lect. prof. sci. Columbia U., N.Y.C., 1978-; chmn. Italian culture U. Calif., Berkeley, 1975; mem. sci. com. Pio Marone Internat. Research Ctr., 1987; 1987-88; Foreign Language Association, 1983; Chmn. Am. America, 1984; Cona Fero' del Grand'1986, Carriera Viva, Usa Viva, 1989; 1st Division del Libro e Altri Detti, 1980; others; editor: in Italy-Politur Practical [E], 1981; contrib. articles to prof. jour. Bd. visitors Columbia U., N.Y.C., 1987-; as. Friends of Palazzo Orsini com., Venice, Italy, 1985-; v.p. Italy-America C. of C., 1986-88. Decorated Commendatore of the Italian Republic, 1988; recipient Tevere prize for lit. Rome, 1986. Amalfi prize for Communications, 1988. Copul Internat. prize for Journalism, 1988. Fregene prize for non-fiction writing, 1989. Columbus prize for lit., 1989. Promotional prize for Journalism, 1989. Fazio prize for Communications, 1990. Mem. Am. Literary Soc., American Studies, Italian Assn. for North Am. Studies, Ctr. for Internat. Scholarly Exchange, Ctr. for Italian Studies, Acad. Phil. Sci., European Assn. Am. Studies, Office: Fiat USA Inc 373 Park Ave New York NY 10152

COLONNO, JOHN ROBERT, poet, editor, writer; b. Kitchener, Ont., Can., Mar. 24, 1936; a. John Anthony and Irene (Nicholson) C.; m. Ruth Florence Brown, May 11, 1959; B.A., U. Toronto, 1959, postgrad., 1959-60. Editorial asst. U. Toronto Press, 1957-59; asst. editor Ryerson Press, Toronto, 1960-63; v. adv. editor McClelland & Stewart, Toronto, 1964-70; publ. com. Toronto, 1971-; editor Toronto Star, Toronto, 1960-82; Spl. instr. Alhambra Ctr., York U., Toronto, 1965-68; asst. adv. asst. publ. Com. Research, 1968-70; adv. asst. Ctr. Council Arts, 1968-70; chmn. adv. com. 70 poets, including Colman's; Canadian Quarterly, 1974; (with Nikola Brundage) The Bolton Range: A Poet's Reader, 1976; Columbia

Indies, 1981; Colman's Canadiana Quiz Book, 1981; (with George Falady) Learn This Poem of Mine by Heart, 1983; Canadian Literary Landmarks, 1984; (with Michael Richardson) We Stood on Guard, 1985; 1000 Questions about Canada, 1986; Colman's New Can. Question, 1987; poetry Off. Earth, 1987; Mysterious Canada, 1988; Extraordinary Experiences, 1989, 999 Questions About Canada, 1989; Songs of the Great Land, 1989; Mysterious Encounters, 1990; Romantic Can. Cultural medal, 1967; Order Cyril and Methodius 1st class, Enticed King of Mark, 1976; Order Philip, 1986; 1986-87), Assn. Can. TV and Radio Artists. Home: 42 Duff Park Ave, Toronto, ON Canada M6B 2T6

COLONEY, WAYNE HERFORD, civil engineer; b. Bradenton, Fla., Mar. 15, 1925; a. Herndon Perford and Mary Adore (Cramer) C.; m. Anne Elizabeth Benedict, June 21, 1950; 1 child, Mary Adore. B.C.E. summa cum laude, Ga. Inst. Tech., 1950. Registered prof. engr. and surveyor, Fla., Ga., Ala., N.C.; also Nat. Council Engrng. Examiners. Project engr., S.A. Constructors Cos. Venezuela, 1948-49; project engr. Fla. Rd. Dep., 1950-53; heavy engr. Okla., 1958; Engr. Consultant, 1955-57; project engr. Okla. & Hill, Inc., Tampa, Fla., 1957-59; project engr., (then asst. J.E. Greiner Co., Tampa, 1959-64); pstr. Resett. Deltas & Colouey, Tallahassee, 1963-70; pres. Wayne H. Coloney Co., Inc., Tallahassee, 1970-78; chmn. bd. chief exec. officer, 1978-83; pres. as. Tanager Corp., 1975-83; chmn. bd. chief exec. officer Coloney Co. Const. Engrs., Inc., 1978-; dep. chmn. Honorary Allynomics Am., Tallahassee, 1983-; v.p. dir. Herndon Coloney Inc., Tallahassee, 1983-; chmn. adv. com. Area Vocal Tech. Sch., 1965-76; pres. Retm. Sch. Corp., 1983-; Pres. Miami, Con. Group, 1983-87; pres. bd. dir. Internat. Enterprise, 1987-73. Presenting and funding systems, design and construction aircraft fuel tank, the mounting structure, carrier engine, detector, bracket system for fuel tank; enstr. articles to prof. jour. Pres. United Fund Louisiana County, 1971-72; bd. dir. Springtime Tallahassee, 1970-72; pres., 1981-82; bd. dir. Heritage Found., 1965-71; pres., 1967; mem. Pres.'s Adv. Council on Indust. Innovation, 1978-79; bd. dir. LeMaye Art Foundation, 1973; v.p., 1974-75; bd. dir. Goodwill Industries, 1972-73; Tallahassee-Popular Friendship Comm., 1964-73; mem. Adv. Com. for Hist. and Cultural Preservation, 1969-71; Sector Bus. Serv. Served with AUS, 1943-46. Fellow ASCE, Am. Soc. Civil Engrs., Am. Soc. Mech. Engrs., Fla. Soc. Prof. Land Surveyors, Tallahassee C. of C., Am. Engrg. Soc., Am. Architecture Assn., Fla. Small Bus. Assn. (pres. 1981), Sigma & Mfg. Engrs. (1982-), Phi Kappa Phi, Omicron Delta Kappa, Sigma Alpha Epsilon, Tau Beta Pi, Epsilon Psi, Omega Psi, Kappa Kappa Gamma and Country. Home: 303 McDonald St Tallahassee FL 32308. Office: Coloney Co Const Engrs Inc PO Box 668 Tallahassee FL 32302

COLONNER, MARC LEOPOLD, neuroanatomist, educator; b. Quebec, Que., Can., May 12, 1930; a. Jean and Enid (Bourgeois) C.; m. Lise De Gagne, Oct. 24, 1959; 1 son, Jean, B.A., B.Ph., U. Ottawa, 1951, M.D., 1959, M.S., 1960; Ph.D., U. Coll. London, 1963. Asst. prof. anatomy U. Ottawa, 1963-65; asst. prof. dept. physiology U. Montreal, Que., Can., 1965-67; asst. prof. anat. follow med. adv. group Med. Research Council, Can., 1967-69; prof. head dept. anatomy U. Ottawa, 1969-76; prof. dept. anatomy Level U. Quebec, Que., 1976-; recipient Luderle Med Faculty award, 1966; Charles Juvon Herrick award Am. Assn. Anatomists, 1967. Fellow Royal Soc. Can.; mem. Am. Assn. Anatomists; Mem. Soc. Neurosci.; mem. Can. Assn. Anatomists (pres. 1973-75). Club: Cajal. Office: Dept. Anatomy, Faculty of Medicine, Laval Univ., Quebec, PQ Canada G1K 7P4

COLONNO, ROBERT, labor relations educator; b. Thousand Bay, Ont., Can., Dec. 25, 1929; a. Henry and Ann Marie (Dines) C.; m. Marilyn Jane Mackay, Nov. 3, 1954; children: James Mark, Jay Melaine. Grad. Smith High Sch., Thousand Bay, Ont. CP Rail, Montreal, Que., Can., 1961-66; asst. prof. anat. follow med. adv. group Med. Research Council, 1966-69; mgr. labor relations, 1965-77; asst. v.p. labor relations, 1977-81; v.p. ind. relations, 1981-; Mem. Ry. Pers. Assn. (pres. 1983-84; exec. com. 1981-); Am. Mgmt. Assn., C. of C. Employer-employee rels. com. (com. Mtn. Assn., Can. Occupational Protection System (nat. adv. com.), Federally Regulated Employers-Transp. and Communications, Internat. Bus. Com. Can. (bd. dir.), Mgmt. Com. for Responsible Employee Rel., Ry. Assn. Can. (labor rels. com.), Montreal Bd. Trade, Cmf. Bd. of Can. labor rels. com.), Can. Labor Market and Productivity Centre (bd. dir.), Railworkers' Club (Montreal), 1981-; Mem. Ry. Pers. Assn. Bd. of Dir., Pointe Claire, PQ Canada H9R 4H6. Office: CP Rail, 910 Paul St PO Box 6042, Montreal, PQ Canada H3C 3E4

COLONAS, STEPHEN WILLIAM, federal official; b. Houston, May 15, 1932; a. William Constantine and Betty (Dwyer) C.; m. Stefani, Wayne Ste U., 1974-76; B.A., Mich. State U., 1960. Member specialist FERC, Washington, 1960-81; legis. asst. Congressman Bill Archer, Washington, 1961-64; legis. asst. Exec. Officer Pres. U.S., Washington, 1964-67; asst. 1967-69; dep. asst. sec. Dept. State, Washington, 1969-; Mem. Naval Res Assn. Greek Orthodox. Office: Dept. State Legal Affairs 2201 C St NW Washington DC 20520

COLQUHITT, LINDON AUGUSTINE, mathematician educator; b. Fort Worth, Jan. 25, 1919; a. Fred Augustus and Maude Lena (Foyist) C.; m. Betty Fagan, May 29, 1946; children: Clare E., Corlaine A. B.A., Tex. Christian U., 1939; M.A., Ohio State U., 1941; Ph.D., 1948; postgrad., Calif. Inst. Tech., 1942. Asst. inst. math. Ohio State U., 1946-48; mem. faculty Tex. Christian U., 1948-89; prof. math., 1955-89; emeritus, 1989-; chmn. dep., 1962-79; v. faculty U. Tex. Austin, Spring 1980; v. nuclear engr. Council, Fort Worth, summer 1955-56. Served with USAAF, 1942-44, ETO, Fort Worth, 1944-45; inst. to asst. sec. May, 1955-56; administrative asst., Senator Everett Sutherland U.S. Senate, 1964-65; v. pres. Goddard & Shreve, 1961-69; v. publ. control to pres. of U.S. 1964-72; v. publ. Culture & Shreve, Washington, 1973-74; asst. Fellowship House, Washington, 1975-76; Priests Fellowship, 1976-; Author: Riva Again, 1975; Life Sentence, 1979; Crime and The Responsible Community, 1980; Loving God, 1983; Who Speaks for God?, 1985; Kingdoms in Conflict, 1987; Against the Night, 1989 Campaign mgr. Salvationist campaign, 1960. Capt. USMC, Korea. Recipient Religious Heritage award, 1977; Aba Laurus award, 1964; Preacher award, 1966; named Layman of Fr., 1983. Mem. Order of Ch. Beta Theta Pi. Baptist. Office: Prison Fellowship PO Box 17500 Washington DC 20011

COLSON, CHARLES WYNELL, by minister, writer; b. Britain, Oct. 16, 1931; a. Wendell Bull and Inez (Dewey) C.; m. Nancy Billings, June 3, 1953; children: Wendell Bull II, Christine B., Emily Ann, m. Patricia Ann Hughes, Apr. 4, 1964; A.B. Bryn Mawr U., 1953; J.D. George Washington U., 1959; LL.D. (hon.), Wheaton Coll., 1982; Houghton Coll., 1983; Eastern Coll., 1983; Andrews Coll., 1984; Taylor U., 1985; Geneva Coll., 1987; John Brown U., 1988; Abney Coll., 1989; LeTourneau U., 1990; Prof. practice Washington, 1961-69; inst. to asst. sec. May, 1955-56; administrative asst., Senator Everett Sutherland U.S. Senate, 1964-65; v. pres. Goddard & Shreve, 1961-69; v. publ. control to pres. of U.S. 1964-72; v. publ. Culture & Shreve, Washington, 1973-74; asst. Fellowship House, Washington, 1975-76; Priests Fellowship, 1976-; Author: Riva Again, 1975; Life Sentence, 1979; Crime and The Responsible Community, 1980; Loving God, 1983; Who Speaks for God?, 1985; Kingdoms in Conflict, 1987; Against the Night, 1989 Campaign mgr. Salvationist campaign, 1960. Capt. USMC, Korea. Recipient Religious Heritage award, 1977; Aba Laurus award, 1964; Preacher award, 1966; named Layman of Fr., 1983. Mem. Order of Ch. Beta Theta Pi. Baptist. Office: Prison Fellowship PO Box 17500 Washington DC 20011

COLSON, EARL M., lawyer; b. Blythe, Ala., B. 1930; a. Abraham and Rebecca (Hecker) C.; m. Helen Theresa Auster, Apr. 24, 1960; children: Adam Thomas, Amy Esther, Deborah Auster, B.S. magna cum laude, Syracuse U., 1950; LL.B. magna cum laude, Harvard U., 1957; Bar, N.Y., 1958; D.C., 1960. Assoc. Chabotree, Paris, Whitehead & Wolf, N.Y.C., 1957-60. Arnt, Foss, Kintner, Plotkin & Kahn, Washington, 1960-68; partner Arnt, Foss, Kintner, Plotkin & Kahn, 1968-; asst. prof. law Georgetown U., 1970-; lect. on tax subjects, Author: Capital Gains and Losses, 1967; Federal Taxation of Income, Gifts and Trusts, 1975; Bd. dir. Washington Hebrew Congregation, 1979-; v. p., 1968-90; pres., 1990-; trustee Kingsbury Center, 1978-81; Mem. ABA (chmn. asst. and pfr. tax com. asst. Institute 1972-73); D.C. Bar Assn. (chmn. tax com. 1971-72; trans. bd. gov. 1974-76); Am. Law Inst., City Bar Assn. N.Y. Club-

MA, 1940; M.A., Radcliffe Coll., 1941; Ph.D., 1943; PhD (hon.), Brown U., 1972; D. of Scrying, 1979; D.Sc., U. Rochester, 1983. Asst. asst. anal. analyst War Relocation Authority, 1942-43; research asst. Harvard, 1944-45; research officer Rhodes-Livingstone Inst., 1946-47, dir., 1948-51; asst. lecturer Manchester U., 1951-53; assoc. prof. Oranier Coll., 1954-55; research assoc., assoc. prof. African Research Program, Britain U., 1955-59, part-time, 1959-61; prof. anthropology, 1959-63; prof. anthropology U. Calif., Berkeley, 1964; prof. emeritus, 1964-; v. prof. U. Zambia, 1967; Lewis Henry Morgan Inst. U. Rochester, 1974; v. asst. assoc. relegate various program Queen Elizabeth House, Oxford, 1982-89; Author: The Mashu, 1951; Marriage and the Family Among The Plateau Tonga, 1958; Social Organization of the Gwanee Tonga, 1960; The Plateau Tonga, 1962; The Social Consequences of Recruitment, 1971; Tradition and Contract, 1974; jr. author Secondary Education and the Formation of an Elite, 1980; Voluntary Efforts in Decentralized Management, 1983; jr. author For Prayer and Profit, 1988; jr. editor: Seven Tribes of British Central Africa, 1951; jr. editor: People in Upland, 1987; Fellow Ctr. Advanced Study Behavioral Sci., 1963-64; Fellow Fulbright Calif. Inst. Tech., 1975-76; AAUW traveling fellow, Fulbright Am. Anthropol. Assn., Brit. Assn. Social Anthropology, Royal Anthropol. Inst. (hon.); mem. Nat. Acad. Sci., Am. Acad. Arts and Sci., Am. Assn. African Studies (Disting. Africanist award 1988), Soc. Women Geographers, Phi Beta Kappa. Avocations: walking, opera, reading. Office: U. Calif. Dept. Anthropology Berkeley CA 94720

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