Before the
Florida Public Service Commission

Docket No. 960444-WU

In the Matter of

Application for rate increase and
for increase in service availability
charges in Lake County by
Lake Utility Services, Inc.

Direct Testimony of

Don Rasmussen
Vice President and Regional
Director of Operations

for

Lake Utility Services, Inc.

July 11, 1997

Q. Would you please state your name and business address?

A. My name is Donald W. Rasmussen, and my business address is 200 Weathersfield Avenue, Altamonte Springs, Florida.

Q. By whom are you employed and in what capacity?

A. I am employed by Utilities, Inc., the parent company which owns 100% of the stock of Lake Utility Services, Inc. (LUSI). Presently, I serve as Vice President and Regional Director of Operations and am responsible for the administration and operation of all water and wastewater systems in Florida owned and operated by subsidiaries of Utilities, Inc.

Q. Please summarize your background and experience in the industry of providing water and sewer service to the public.

A. I was hired by Utilities, Inc. in 1970. I was soon promoted to the position of Area Manager, where I was responsible for the operations of several water and wastewater plants. During this time I acquired the highest Illinois licenses awarded in the water and wastewater fields and continue to hold a Class A certificate in water and a Class 1 certificate in wastewater. I also conducted safety seminars for the company and was a licensed paramedic.

In 1982, I was transferred to Altamonte Springs and accepted the position of Regional Director for Utilities, Inc. of Florida. In

1990, I was given the title of Vice President of the Utilities, Inc. of Florida systems. I currently maintain a Grade A certificate in water and a Grade C certificate in wastewater in the State of Florida. I have attended numerous seminars dealing with operations and maintenance of water and wastewater systems and serve on the Board of Directors of the FWWA.

Q. What is the purpose of your testimony in this proceeding?

A. I have come before the Commission to explain Lake Utility Services, Inc.'s (LUSI) philosophy in providing high quality customer service. My testimony will include an explanation of the operation of our systems including the improvements made to provide service to customers having homes with Ethylene Dibromide (EDB) contaminated wells. Additionally, I will discuss the Staff's alleged excessive unaccounted for water in the system. Finally, I will discuss the extensive program we have embarked upon to interconnect the majority of our systems.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring the four volumes of engineering information and system maps that were filed as part of the Minimum Filing Requirements for the test year ending December 31, 1995 that were submitted to the Commission on June 3, 1996. In addition, I have attached five exhibits to my testimony.

Customer Service

Q. Please provide a summary of the qualifications of your operating Staff responsible for LUSI.

A. The following operators are responsible for the operation and maintenance of the Clermont systems.

Bryan Gongre - Area Manager

Bryan is the Area Manager for all our LUSI systems. He is responsible for overseeing the day-to-day operation of these systems. Bryan began employment with Utilities Inc. of Florida in 1992 and presently holds a Class "B" certificate in water.

Howard J. Aldrich

"Jay" Aldrich began employment with us in 1990. He is responsible for the day-to-day operations of some of these systems. He holds a Class C certificate in both water and wastewater.

Robert Risner

Robert Risner began employment with us in 1995. He holds a Class "A" certificate in water. He is responsible for the day-to-day operations of some of the Clermont area systems.

Q. Please explain LUSI's philosophy in treating and serving its customers as well as the procedures associated with handling customer calls.

A. Our customer service philosophy is based upon the premise that each customer is an individual and should be treated as such. In addition, we emphasize that 100% customer satisfaction is our goal and nothing less. Accordingly, we adapt our procedures to take into account the individual needs and requirements of our customers. And, service quality is closely monitored for each system by our Florida staff, myself, as well as by our corporate office.

Finally, our organization has maintained a system whereby individual employees are held accountable for service quality. Throughout our organization, service quality is utilized as a primary factor in all employee performance reviews, including my own.

Q. Please explain how a typical customer service call is handled.

A. Customer calls, regardless of their nature, come into the branch office in Altamonte Springs. Customers located out of the area are furnished with a toll free number. During office hours each call is answered by a customer service representative.

If there is a problem related to field operations, a computer generated service order is issued and directed to the operator responsible for that particular system. The service orders are immediately relayed to the operator by means of a fax machine or radio communications. Depending on the nature of the service concern, the operator will include the service order in his schedule and respond to it as necessary. Emergencies--such as water leaks or water quality complaints--are always given immediate attention. After the problem is rectified, the operator relays information as to how the problem was resolved to the customer service representative, and the resolution is entered into the computer system as a permanent record of the call.

Billing inquiries are handled much in the same way as service calls. All inquiries are recorded on the customer's account by entering the information into the computer system. Any billing inquiries or complaints are resolved as soon as possible.

Q. Does your organization provide customer service 24 hours per day?

A. Yes. Customers calling after office hours are forwarded to our answering service. An operator is assigned to be "on call" during the hours the office is closed. If an emergency should arise, the on-call operator will handle the situation.

Q. How do you rate your Company's quality of service?

A. As a Company we are never completely satisfied with customer service or quality of service and, therefore, we continue to strive to improve every facet of service. Based upon my 27 years of experience in the industry, I would rate our overall quality of service as compared to other private and municipal service providers as very good.

Q. Did the Staff have a different opinion of your Company's quality of service? If so, please explain.

A. Yes the Staff rated the quality of service as marginal at best. However, I disagree with this analysis. The Staff based the overall quality of service on three separate components. These are: (1) The quality of the utility's product; (2) The operating conditions of the utility's plant and facilities; and, (3) Customer satisfaction. I would like to discuss each of these components individually.

First, I will address the quality of the utility's product. The Staff stated that the quality is marginal at best. The quality of water meets or exceeds all DEP and health department standards.

The Staff's concerns are prompted by customers who stated, at the customer meeting, that their chlorine level varied. While we certainly recognize that some customers have experienced

variations, this phenomenon is attributable to the expanse of the system, as well as the system configuration. The system consists of approximately 14 miles of water main. Because DEP standards require that we maintain a chlorine residual at the far ends of the system to ensure sanitary conditions, our operators flush on an as needed basis to assure a chlorine residual at the ends of our system. When this is done, the level of chlorine in the water may be more noticeable at homes near the well sites for a brief period of time. This is normal and recurring in this type of system and is certainly not indicative of water quality problems.

According to the DEP and the US Health Department, both independent governmental agencies, LUSI meets or exceeds all guidelines for water quality. If the Staff believes the measures established by the DEP are inadequate, the Florida Public Service Commission should issue their own set of guidelines as opposed to relying solely on the testimony of a very few customers.

Clearly, based on the guidelines that are established for LUSI to abide by and measure its performance, the quality of the product furnished by LUSI is adequate.

Second, I will discuss the operating condition of the water utility's facilities. Staff referred to a number of minor

deficiencies noted by DEP in their inspection of the facilities. Most of these deficiencies were operational reporting requirements or lack of proper signs and had no effect on the quality of the water or the overall condition of the facilities. The report is attached as Exhibit ___ (DR-1).

Recently, on June 19, 1997, the DEP completed an inspection of all the systems. They found no facility deficiencies. The minor problems cited were corrected the day of the inspection. I have attached the DEP inspection report, Exhibit ___ (DR-2) demonstrating that our facilities are kept in the best possible operating condition. Consequently, based on the inspection of a third party regulatory agency, the operating condition of the facilities is adequate.

Finally, the Staff felt that customer satisfaction was lacking. The Staff stated that their assessment was because 10 of 918 total customers spoke at the customer meeting indicating problems with chlorine level, sediment, or service problems. Of the 10 customers, only 5 had prior contact with the company to report any problems with the quality of the water. One of the five customers was a former disgruntled employee. While we are never satisfied until all customer problems are corrected, I do not believe that the small percentage of customers who expressed problems is indicative of overall customer dissatisfaction. Furthermore, based on (1) our efforts

to turn a series of stand-alone systems into a regional water system serving all customers in the service territory, including those affected by EDB; (2) Our ongoing involvement in the community; (3) Our immediate response to customer concerns; LUSI provides excellent customer service.

In short, the Staff's characterization of LUSI's customer service is unfair and not in keeping with established guidelines.

System Operation

Q. What water treatment plants are located in LUSI's service area and are involved in this rate case?

A. There are 12 separate water treatment plants located in this service area. This area was granted under Order #920174-WU and is referred to as our Clermont systems. They are identified in the LUSI tariff territorial descriptions as Clermont I, Clermont II, Amber Hill, Lake Ridge, Oranges, Crescent Bay, Crescent West, Lake Crescent Hills, Highland Point and Vistas. Also included in the rate case is Lake Saunders and Four Lakes which are remote from the above systems.

Q. Please describe the improvements made by Lake Utility Services, Inc.

A. LUSI has installed new water mains in its certificated territory for the purposes of interconnecting the majority of its Clermont

systems. In doing so, we have extended our service to many new residential developments and individual homes in the area. Many of the these homes have wells that have been contaminated with EDB which posed a significant health hazard to residents, along with negatively impacting property values.

Additionally, we have installed a second well (well #2) at the Vistas which is waiting for clearance from the Department of Environmental Protection (DEP). We have also replaced the well in the Crescent Bay subdivision.

Q. How much was spent on the installation of the mains to interconnect the various systems?

A. From a review of our company's records, LUSI spent over $900,000 on interconnecting the systems. Attached is a list of invoices supporting the interconnecting mains as Exhibit ___ (DR-3). These invoices have been reviewed by me and represent all of the money spent on the interconnection through December 31, 1995. These balances are utilized in Mr. Kramer's schedules (Exhibit ___ (MFK-3)) for preparation of test year rate base.

Unaccounted For Water

Q. Staff concluded that there was excessive unaccounted for water. Do you disagree with that conclusion? If so, why?

A. Yes, I disagree with that conclusion. Staff concluded that there were excessive amounts of unaccounted for water in 4 groups of systems. The amounts, by system, are: (1) The Oranges - Vistas / 2,057 GPD; (2) Highland Point - Crescent Bay - Crescent West - Lake Crescent Hills / 16,744 GPD; (3) Lake Saunders / 782 GPD, and (4) Four Lakes / 3,795 GPD.

In the system of Highland Point - Crescent Bay - Crescent West - Lake Crescent Hills, I feel there are factors which should allow for more unaccountable water than the arbitrary 10% the Staff allows as an acceptable level. During 1995 there were 26,588 feet of water main added to this system. This represents approximately a 40% increase in the area served. The Staff concluded that the excessive amount for this system amounted to 6%. Under these circumstances, with an unusually large amount of construction and flushing of new mains, I don't believe that the 6% was excessive. We have initiated several procedures to measure construction water amounts in the future.

Lake Saunders and Four Lakes are both older systems. Recently, Staff has allowed 12.5% as an acceptable level of

unaccountable water for these older systems. This would reduce the excessive unaccountable water to 245 GPD and 567 GPD respectively.

When these factors are applied to these systems, none of the unaccountable water is excessive.

Q. Is the Staff's use of 10% as an acceptable level of unaccountable water widely accepted in the industry?

A. No. The 10% level in which the Staff relies upon is a general guideline, but not a steadfast rule. Attached as Exhibit ___ (DR-4) is a reprint from an American Water Works Association (AWWA) publication entitled "Water Distribution Training Course." This publication is quite clear that the amount of unaccounted for water is entirely dependent on the system involved and its characteristics. Specifically it states,

"The proper amount of unaccounted for water in any given system is a function of that system alone. It might range, in a substantially fully metered system, from as much as 35 percent to as little as 5 percent. The former percentage may apply if pressures are very high and variable, leakage is difficult to detect and remedy, the pipe system is extensive and old, or practically all customers use water only in small amounts (a principal cause of under registration of meters). The smaller percentage may be the result of low pressures, the

existence of only a few customers who each take a considerable percentage of the total water, and a small mileage of mains. A fair average of unaccounted for water might be 10 - 20 percent for fully metered systems with good meter maintenance programs and average conditions of service."

Thus the AWWA document does not speak of specific limits for all heterogeneous systems, but instead describes only a "fair average" for systems which meet certain general descriptions.

Q. Based on the AWWA's guidelines for unaccounted for water, would you characterize the LUSI systems' unaccounted for water as excessive?

A. No. On the contrary, considering the tremendous amount of growth in the area, and the length of main installed between systems LUSI has a minimal amount of unaccounted for water.

The Interconnection Program

Q. The Staff based its used and useful calculations for the distribution systems on lot counts and lots served. Do you agree with their calculations?

A. No, not with all the systems. Please refer to my Exhibit ___ (DR-5). I do not agree with the number of lots and number of lots served in the Clermont II area. The correct number of lots

served is 35 instead of 70. The correct total number of lots is 70 instead of 121.

The Highland Point - Crescent Bay - Crescent West and Lake Crescent Hills, system includes the South Clermont area and Preston Cove. In the South Clermont area, mains were extended to serve homes with EDB many of the mains passed existing homes with wells. These homes will probably never connect to the water system and therefore they should not be included in the calculation. There were 44 of these homes in the South Clermont area.

The total number of lots in this area is 918. The number of lots serviced in this area is 433. These figures are represented in Exhibit ___ (DR-5).

Q. Where did you obtain your lot counts and number of connections as of December 31, 1995?

A. I counted the number of potential lots served from maps of each individual subdivision. The maps are provided to the utility from the developers and previous owners.

The number of connections are simply the number of customers tapped into our system at December 31, 1995.

Q. Will the interconnected systems be able to serve other residences?

A. Yes, the interconnected systems will be able to serve existing and future residences along the routes where mains have been installed.

Q. Are all the plants presently in compliance with the Department of Environmental Protection's regulations?

A. Yes, At the present time there are no known compliance problems with any of the systems.

Q. Please describe the EDB contamination of the individual wells.

A. Years ago the Clermont area was primarily made up of orange groves. Many of the groves were treated with a carcinogen, unknowingly at the time, called EDB. This chemical does not break down as it seeps into the ground. Therefore, once it reached the shallow aquifer many of the residential wells became contaminated thereby endangering the public health. As a solution to the health problem, both the DEP and the County Health Department recommended that these homes be connected to a central potable water system. Accordingly, we were asked to work closely with these departments to accomplish this goal and to provide quality water service to all the area residents. In the past few years the DEP has also

discovered high levels of nitrate, another contaminant, in some of the shallow residential wells.

Q. Please describe the program to interconnect the water systems.

A. When we were granted the service area in Order #920174-WU, and in cooperation with DEP, we immediately began an aggressive program to interconnect our systems. At present, the Clermont I, Amber Hill and Lake Ridge systems are all interconnected to each other. The Vistas and Oranges systems are also interconnected to each other, as are the Crescent Bay, Crescent West, Lake Crescent Hills and Highland Point systems.

Q. Please describe any future interconnection plans.

A. We plan to interconnect the Clermont II system to the interconnected systems of Clermont I, Amber Hill and Lake Ridge. We are also planning to connect the Oranges and Vistas systems to this group. Once these interconnections have been completed, we will have two large groups of interconnected systems. Our goal is to eventually have one large system.

Q. Do these systems have well capacity available to serve the certificated service area?

A. Yes. The combined pumping capacity of LUSI's existing wells is in excess of 6,000 GPM. Each system except Clermont II

was individually capable of providing peak service requirements plus its own fire flow capacity. As we continue to interconnect these systems, the diversified peak demand will be less than the sum of the nine separate peak demands. The fire flow requirements for the interconnected systems will not have to be duplicated. Therefore, the capacity of the interconnected systems should be adequate to serve the service area.

Q. Will additional capital investment by the utility to serve the interconnected systems?

A. Yes. Depending on future growth, the system will potentially require the installation of an elevated storage tank, pressure boosters, pressure reducers, and reconfiguration of sections of distribution and transmission mains.

Q. Are there other benefits to interconnecting these utility systems besides solving the EDB problem?

A. Yes. The interconnected systems will assure the following:

- Improved reliability of service.
- Lower operating costs.
- Better service for the customers.
- Improved water quality.
- A safer supply.
- Insures consistent monitoring.

Q. Does this conclude your testimony?

A. Yes it does.

Department of Environmental Protection

COPY

Docket 960444-WU
Exhibit ___ (DR-1)

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

November 5, 1996

Utilities, Inc. of Florida
200 Weathersfield Avenue
Altamonte Springs, FL 32714

OCD-PW-CE-96-1522

Attention: Donald Rasmussen

Lake County - PW

* Crescent Bay S/D	- 3354686	Amberhill S/D	- 3354648
* Crescent West S/D	- 3354690	Lake Ridge Club	- 3354884
* Highland Point	- 3354652	Clermont #1/Four Winds	- 3351582
* Lake Crescent Hills	- 3354883	Four Lakes & Harbor Oaks	- 3354647
* Oranges S/D, The	- 3354685	Clermont #2/Carr Water	- 3350153
*Vistas S/D, The	- 3354773		

Dear Mr. Rasmussen:

The Department conducted inspections of your public water systems on October 22, 1996. These inspections were conducted by me in the presence of Mr. David Zusi. *Copies of the Sanitary Survey Reports and/or Water Treatment Plant Compliance Inspection Reports are enclosed for your reference and records.

Deficiencies found during these inspections and/or in Department records are indicated below. These deficiencies shall be corrected in order to return to compliance with Florida Administrative Code (F.A.C.) Rules 62-550, 62-555, 62-560 and 61E12.

Please correct the indicated deficiencies, and notify the Department in writing that the deficiencies have been corrected, **no later than December 5, 1996**. *(You may use the enclosed response form to indicate the corrective actions taken.)*

DEFICIENCIES

Crescent Bay S/D--3354686

1. MOR reporting--The number of service connections is not being reported.
2. Maintenance-- Algal growth in the pump head bowl.
3. Warning sign-- Need to post Chlorine gas use by the fence.

NOTE: For Chemical Monitoring, please call DEP.

Crescent West S/D--3354690

1. MOR reporting-- The number of service connections is not being reported.
2. Well vent needed a screen.
3. Chlorine room needed a cross-ventilation.

NOTE: For Chemical Monitoring,please call DEP.

Highland Point--3354652

1. MOR reporting--The number of service connections is not being reported.

NOTE: The system is off-line at the time of visit.

Lake Crescent Hills--3354883

1. Clean Algal growth in the pump head bowl.
2. There was no auxiliary generator plan on-site.The generator was not tested at the time of visit,Mr. Zusi did not have the key to operate the generator.
3. MOR reporting--The number of service connections is not being reported.

NOTE: For Chemical Monitoring, please call DEP.

Oranges S/D, The--3354685

1. MOR reporting-- The number of service connections is not being reported.
2. Need a screen on well vent.

NOTE: For Chemical Monitoring, please call DEP.

Vistas S/D, The--3354773

1. MOR reporting--The number of service connections is not being reported.
2. Need a screen on well vent.
3. The screen on the air release valve was torn.

NOTE:For Chemical Monitoring, please call DEP.

Clermont #1/FourWinds--3351582

1. MOR reporting--The number of service connections is not being reported/updated.
2. Chlorine line was broken at the time of visit. The line was being fixed during the inspection.
3. The escape hatch was rusted.

NOTE:For Chemical Monitoring, please call DEP.

Amberhill S/D--3354648

1. MOR reporting--The number of service connections is not being reported/updated.
2. Clean Algal growth in the pump head bowl.
3. Need a cross ventilation in the Chlorine room.
4. Provide adequate air-pak.

NOTE:For Chemical Monitoring, please call DEP.

Lake Ridge Club--3354884

1. MOR reporting--The number of service connections is not being reported.
2. No physical deficiencies noted at the time of visit.

NOTE:For Chemical Monintoring, please call DEP.

Four Lakes & Harbor Oaks--3354647

1. MOR reporting-- The number of service connections are not being reported.
2. No physical deficiencies noted at the time of visit.

NOTE:For Chemical Monitoring, please call DEP.

Clermont #2/ Carr Water System--3350153

1. MOR reporting-- The number of service connections are not being reported/ updated.
2. Check pin hole leaks on the pressure tank.

NOTE:For Chemical Monitoring, please call DEP.

The Department values your continued cooperation in operating and maintaining your water system, and appreciates the assistance provided during the sanitary survey.

If you have any questions concerning this letter, please contact me at the above address or by phone at (407) 893-3319.

Sincerely,

Roberto C. Ansag

Roberto C. Ansag, Supervisor
Drinking Water Compliance/Enforcement

cc: Lake County Public Health Unit
Lee Munroe, PSC (via fax)

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name HIGHLAND POINT County Lake PWS ID # 3354652
Plant Location Bronson Rd. Off S.R. 561 South ,Clermont Phone 407/869-1919
Owner Name Utilities,Inc. of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Ave.,Altamonte Springs, Fl 32714
Contact Person David Zusi Title Reg. Ops. Mgr. Phone 407/869-1919
This Survey Date 10/22/96 Last Survey Date 3/3/93 Last C.I. Date 10/11/95

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date
WC35- 2102, 2/5/87

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential S/D

Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
Jay Aldrich "C"-6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* N/A *Actual* N/A
Days/wk: *Required* 6 *Actual* 6
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☐ No ☒ Yes ☐ N/A

Number of Service Connections Unk
Population Served Unk Basis
Average Day (from MORs) 135,903 gpd
Max. Day (from MORs) 358,000 gpd
Max-day Design Capacity 432,000 gpd
Comments

COMET: SITE ID PROJECT ID 100207

RAW WATER SOURCE

☒ GROUND; Number of Wells 1
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☒ Emergency Water Source Lk crescent Hills **
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☒ None ☐ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Chlorination

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 3" Hersey
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments **Crescent Bay, Crescent West

PWS ID # 3354652
Date 10/22/96

GROUND WATER SOURCE

Well Number		1			
Year Drilled		1986			
Depth Drilled		520'			
Drilling Method		Rotary			
Type of Grout		Unk			
Static Water Level		32'			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		Unk			
Length (outside casing)		71'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk. Iron			
Well Contamination History		Unk			
Is inundation of well possible?		No			
6' X 6' X 4" Concrete Pad		Yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing	>200'			
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Goulds			
	Model Number	10DHL-7			
	Rated Capacity (gpm)	600			
	Motor Horsepower	60			
Well casing 12" above grade?		Yes			
Well Casing Sanitary Seal		Yes			
Raw Water Sampling Tap		Yes			
Above Ground Check Valve		Yes			
Fence/Housing		Yes			
Well Vent Protection		None			

COMMENTS _____

PWS ID # 3354652
Date 10/22/96

CHLORINATION (Disinfection)
Type: ☐ Gas ☐ Hypo
Make _____ Capacity gpd
Chlorine Feed Rate _____
Avg. Amount of Cl_2 gas used N/A
Chlorine Residuals: Plant _____ Remote _____
Remote tap location _____
DPD Test Kit: ☐ On-site ☐ With operator
☒ None ☐ Not Used Daily
Injection Points _____
Booster Pump Info _____
Comments _____

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☐	
Auto-switchover	☐	☐	
Alarms:			
Loss of Cl_2 capability	☐	☐	
Loss of Cl_2 residual	☐	☐	
Cl_2 leak detection	☐	☐	
Scale	☐	☐	
Chained Cylinders	☐	☐	
Reserve Supply	☐	☐	
Adequate Air-pak	☐	☐	
Sign of Leaks	☐	☐	
Fresh Ammonia	☐	☐	
Ventilation	☐	☐	
Room Lighting	☐	☐	
Warning Signs	☐	☐	
Repair Kits	☐	☐	
Fitted Wrench	☐	☐	
Housing/Protection	☐	☐	

AERATION (Gases, Fe, & Mn Removal)
Type _____ Capacity _____
Aerator Condition _____
Bloodworm Presence _____
Visible Algae Growth _____
Protective Screen Condition _____
Comments Well is off line. Water was being provided by the other three systems.

STORAGE FACILITIES
(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	5,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	38/55		
Access Padlocked			
Height to Bottom of Elevated Tank	N/A		
Height to Max. Water Level	N/A		

Comments Did not inspect the plant. Well was off line.

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments _____

PWS ID # 3354652
Date 10/22/96

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	9/96	Monthly
		2	Distribution						
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	2/21/91	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	8/31/95	1996
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	12/23/93	waiver 12/31/01
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	waiver
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Lead and Copper	047	*(Note D)*	---	---			---	9/95	1996
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # _____
Date _____

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354652
Date 10/22/96

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

1. MOR reporting- Number of service connection is not being reported.

NOTE: Plant was off line at the time of visit.

Inspector Roberto C. Arvizu Title Env. Supervisor II Date 10/22/96

Approved by _____ Title _____ Date _____

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name CRESCENT WEST S/D County Lake PWS ID # 3354690
Plant Location South Lakeshore Dr.,Clermont, Fl 32711 Phone 407/869-1919
Owner Name Utilities, Inc. of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Ave. Altamonte Springs, Fl 32714
Contact Person David Zusi Title Reg. Ops. Mgr. Phone 407/869-1919
This Survey Date 10/22/96 Last Survey Date 3/3/93 Last C.I. Date 10/11/95

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date
WC35-2112, 3/16/88
WD35- 188270, 11/21/90
☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential S/D
5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
Jay Aldrich "C"- 6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* N/A *Actual* N/A
Days/wk: *Required* 6 *Actual* 6
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☐ No ☒ Yes ☐ N/A
Number of service connection.

Number of Service Connections Unk
Population Served Unk Basis
Average Day (from MORs) 207,000 gpd
Max. Day (from MORs) 405,000 gpd
Max-day Design Capacity 432,000 gpd
Comments

COMET: SITE ID PROJECT ID 100205

RAW WATER SOURCE

☒ GROUND; Number of Wells 1
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☒ Emergency Water Source Lk.Crescent Hills
Emergency Water Capacity 432,000 gpd ***

AUXILIARY POWER SOURCE

☐ Yes ☒ None ☐ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments ***-This system is interconnected with three other systems.Lk. Crescent Hills,Crescent Bay

TREATMENT PROCESSES IN USE

Chlorination

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 3" Hersey
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☐ Yes ☒ No ☐ N/A
Comments ***-Highland Point

PWS ID # 3354690
Date 10/22/96

GROUND WATER SOURCE

Well Number		1			
Year Drilled		1987			
Depth Drilled		400'			
Drilling Method		Cable Tool			
Type of Grout		Unk			
Static Water Level		50'			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		Unk			
Length (outside casing)		105'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk. Iron			
Well Contamination History		Unk			
Is inundation of well possible?		No			
6' X 6' X 4" Concrete Pad		Yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing	>200'			
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Goulds			
	Model Number	8JH0-3			
	Rated Capacity (gpm)	600			
	Motor Horsepower	50			
Well casing 12" above grade?		Yes			
Well Casing Sanitary Seal		Ok			
Raw Water Sampling Tap		Yes			
Above Ground Check Valve		Yes			
Fence/Housing		Yes			
Well Vent Protection		None			

COMMENTS _____

PWS ID # 3354690
Date 10/22/96

CHLORINATION (Disinfection)
Type: ☒ Gas ☐ Hypo
Make W & T Capacity 150 gpd
Chlorine Feed Rate 2lbs./day
Avg. Amount of Cl_2 gas used unk
Chlorine Residuals: Plant 1.8 Remote 1.5
Remote tap location
DPD Test Kit: ☐ On-site ☒ With operator ☐ None ☐ Not Used Daily
Injection Points
Booster Pump Info Goulds 3/4 Hp
Comments

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☒	N/A
Auto-switchover	☐	☒	N/A
Alarms:			
Loss of Cl_2 capability	☐	☒	
Loss of Cl_2 residual	☐	☒	
Cl_2 leak detection	☐	☒	
Scale	☒	☐	
Chained Cylinders	☒	☐	
Reserve Supply	☒	☐	
Adequate Air-pak	☒	☐	w/ operator
Sign of Leaks	☐	☒	
Fresh Ammonia	☒	☐	
Ventilation	☐	☒	need cross vent
Room Lighting	☒	☐	
Warning Signs	☐	☒	
Repair Kits	☐	☒	
Fitted Wrench	☒	☐	
Housing/Protection	☒	☐	

AERATION (Gases, Fe, & Mn Removal)
Type N/A Capacity
Aerator Condition
Bloodworm Presence
Visible Algae Growth
Protective Screen Condition
Comments

STORAGE FACILITIES
(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	10,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	38/55		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	--		
Height to Max. Water Level	--		

Comments

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments

PWS ID # 3354690
Date 10/22/96

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	9/96	Monthly
		2	Distribution						
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	10/30/90	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	8/31/95	1996
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/6/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	12/23/93	waiver 12/31/01
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	waiver
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Lead and Copper	047	*(Note D)*	---	---			---	1995	9/96
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # _____
Date _____

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354690
Date 10/22/96

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

1. Need well vent screen.
2. Data reporting on the MOR(service connection).
3. Need a cross ventilation in the chlorine room.
4. Need warning signs for gas chlorine use.
5. Need a loss of chlorination alarm.

Inspector Roberto C. Cuevas Title Env. Supervisor II Date 10/22/96

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name ORANGES S/D, THE County Lake PWS ID # 3354685
Plant Location Lake Louisa Rd.,Clermont, Fl 32711 Phone 407/869-1919
Owner Name Utilities Inc. of Florida Phone 407/8691919
Owner Address 200 Weathersfield Ave., Altamonte Springs, Fl 32714
Contact Person David Zusi Title Reg. Ops. Mgr. Phone 407/8691919
This Survey Date 10/22/96 Last Survey Date 3/3/93 Last C.I. Date 10/6/95

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date
WC35-2106,-7/7/87

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential S/D
5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
Jay Aldrich "C"-6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* N/A *Actual* N/A
Days/wk: *Required* 6 *Actual* 6
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☐ No ☒ Yes ☐ N/A
Number of service connection.

Number of Service Connections Unk
Population Served Unk Basis
Average Day (from MORs) 137,000 gpd
Max. Day (from MORs) 224,000 gpd
Max-day Design Capacity 396,000 gpd
Comments

COMET: SITE ID PROJECT ID 100204

RAW WATER SOURCE

☒ GROUND; Number of Wells 1
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☒ Emergency Water Source Vistas S/D
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☐ None ☒ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Chlorination

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 3" Hersey
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments

PWS ID # 3354685
Date 10/22/96

GROUND WATER SOURCE

Well Number		1			
Year Drilled		1986			
Depth Drilled		392'			
Drilling Method		combo			
Type of Grout		Unk			
Static Water Level		59'			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		Unk			
Length (outside casing)		237'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk Iron			
Well Contamination History		Unk			
Is inundation of well possible?		No			
6' X 6' X 4" Concrete Pad		Yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing	>200'			
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Berkley			
	Model Number	6-16			
	Rated Capacity (gpm)	550			
	Motor Horsepower	40			
Well casing 12" above grade?		Yes			
Well Casing Sanitary Seal		Ok			
Raw Water Sampling Tap		Yes			
Above Ground Check Valve		Yes			
Fence/Housing		Yes			
Well Vent Protection		no screen			

COMMENTS _____

PWS ID # 3354685
Date 10/22/96

CHLORINATION (Disinfection)
Type: ☒ Gas ☐ Hypo
Make Regal Capacity 150 gpd
Chlorine Feed Rate Unk
Avg. Amount of Cl_2 gas used unk
Chlorine Residuals: Plant 1.6 Remote 1.3
Remote tap location
DPD Test Kit: ☐ On-site ☐ With operator ☐ None ☐ Not Used Daily
Injection Points
Booster Pump Info
Comments

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☒	
Auto-switchover	☐	☒	
Alarms:			
Loss of Cl_2 capability	☐	☒	
Loss of Cl_2 residual	☐	☒	
Cl_2 leak detection	☐	☒	
Scale	☒	☐	
Chained Cylinders	☒	☐	
Reserve Supply	☒	☐	
Adequate Air-pak	☒	☐	w/operator
Sign of Leaks	☐	☒	
Fresh Ammonia	☒	☐	
Ventilation	☒	☐	
Room Lighting	☒	☐	
Warning Signs	☒	☐	
Repair Kits	☐	☒	fresh lead wash
Fitted Wrench	☒	☐	
Housing/Protection	☒	☐	

AERATION (Gases, Fe, & Mn Removal)
Type N/A Capacity
Aerator Condition
Bloodworm Presence
Visible Algae Growth
Protective Screen Condition
Comments

STORAGE FACILITIES
(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	5,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	38/58		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	N/A		
Height to Max. Water Level	N/A		

Comments

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments

PWS ID # 3354685
Date 10/22/96

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	9/96	Monthly
		2	Distribution						
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	4/22/92	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	8/31/95	1996
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	12/23/93	waiver 12/31/01
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	waiver
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Lead and Copper	047	*(Note D)*	---	---			---	9/95	1996
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # _____
Date _____

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354685
Date 10/22/96

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

1. MOR reporting--The number of the service connections is not being reported.
2. Need a screen on the well vent.

Inspector Roberto C. Arcay Title Env. Supervisor II Date 10/22/96

Approved by _____ Title _____ Date _____

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name VISTAS S/D, THE County Lake PWS ID # 3354773
Plant Location US Highway 27, Clermont Phone 407/869-1919
Owner Name Utilities Inc., Florida Phone 407/869-1919
Owner Address 200 Weathersfield Ave. Altamonte Springs, Fl 32714
Contact Person David Zusi Title Reg. Ops. Mgr. Phone 407/869-1919
This Survey Date 10/22/96 Last Survey Date 3/3/93 Last C.I. Date 10/6/95

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date
WC35-1596009, 5/30/89

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential S/D
5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
Jay Aldrich "C"-6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* N/A *Actual* N/A
Days/wk: *Required* 6 *Actual* 6
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☐ No ☒ Yes ☐ N/A
Number of service connections missing.

Number of Service Connections Unk
Population Served Unk Basis
Average Day (from MORs) 39,322 gpd
Max. Day (from MORs) 156,000 gpd
Max-day Design Capacity 720,000 gpd
Comments

COMET: SITE ID _____ PROJECT ID 100203

RAW WATER SOURCE

☒ GROUND; Number of Wells 1
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☒ Emergency Water Source Oranges S/D
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☒ None ☐ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Chlorination

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 3" Hersey
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments

PWS ID # 3354773
Date 10/22/96

GROUND WATER SOURCE

Well Number		1			
Year Drilled		1988			
Depth Drilled		346'			
Drilling Method		Rotary			
Type of Grout		Unk			
Static Water Level		100'			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		Unk			
Length (outside casing)		103'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk Iron			
Well Contamination History		Unk			
Is inundation of well possible?		No			
6' X 6' X 4" Concrete Pad		Yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing				
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Goulds			
	Model Number	10DHH0			
	Rated Capacity (gpm)	1,000			
	Motor Horsepower	100			
Well casing 12" above grade?		Yes			
Well Casing Sanitary Seal		Ok			
Raw Water Sampling Tap		Yes			
Above Ground Check Valve		Yes			
Fence/Housing		Yes			
Well Vent Protection		No screen			

COMMENTS _____

PWS ID # 3354773
Date 10/22/96

CHLORINATION (Disinfection)
Type: ☒ Gas ☐ Hypo
Make Regal Capacity 150 gpd
Chlorine Feed Rate Unk
Avg. Amount of Cl_2 gas used unk
Chlorine Residuals: Plant 1.5 Remote 1.5
Remote tap location
DPD Test Kit: ☐ On-site ☒ With operator ☐ None ☐ Not Used Daily
Injection Points
Booster Pump Info Goulds 1Hp
Comments Plant is interconnected with Oranges S/D

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☒	
Auto-switchover	☐	☒	
Alarms:			
Loss of Cl_2 capability	☐	☒	
Loss of Cl_2 residual	☐	☒	
Cl_2 leak detection	☐	☒	
Scale	☒	☐	
Chained Cylinders	☒	☐	
Reserve Supply	☒	☐	
Adequate Air-pak	☒	☐	w/operator
Sign of Leaks	☐	☒	
Fresh Ammonia	☒	☐	
Ventilation	☒	☐	
Room Lighting	☒	☐	
Warning Signs	☒	☐	
Repair Kits	☒	☐	Lead wash
Fitted Wrench	☒	☐	
Housing/Protection	☒	☐	

AERATION (Gases, Fe, & Mn Removal)
Type N/A Capacity
Aerator Condition
Bloodworm Presence
Visible Algae Growth
Protective Screen Condition
Comments

STORAGE FACILITIES
(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	10,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	42/50		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	N/A		
Height to Max. Water Level	N/A		

Comments The scree on the air release valve was torn, need to be replaced.

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments

PWS ID # 3354773
Date 10/22/96

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	9/96	Monthly
		2	Distribution						
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	5/20/92	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	8/31/95	1996
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	12/23/93	waiver 12/31/01
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/03/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	waiver
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Lead and Copper	047	*(Note D)*	---	---			---	9/95	1996
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # _____
Date _____

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354773
Date 10/22/96

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

1. MOR reporting-- The number of service connections is not being reported.
2. Need a screen on the well vent.
3. The screen on the air release valve was torn, replace.

Inspector Roberto C. Cuevas Title Env. Supervisor II Date 10/22/96

Approved by _____ Title _____ Date _____

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name CRESCENT BAY S/D County Lake PWS ID # 3354686
Plant Location South Lakeshore Dr., Clermont 32711 Phone 407/869-1919
Owner Name Utilities Inc.of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Ave.,Altamonte Springs, Fl 32714
Contact Person David Zusi Title Reg. Ops. Mgr. Phone 407/869-1919
This Survey Date 10/22/96 Last Survey Date 3/3/93 Last C.I. Date 10/11/95

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date
WC35-2105, 2/1/88

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential S/D
5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
Jay Aldrich "C"-6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* N/A *Actual* N/A
Days/wk: *Required* 6 *Actual* 6
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☐ No ☒ Yes ☐ N/A
Number of service connections is not being reported.

Number of Service Connections Unk
Population Served Unk Basis
Average Day (from MORs) *** gpd
Max. Day (from MORs) *** gpd
Max-day Design Capacity 396,000 gpd
Comments The plant was off line at he time of visit. Water was being provided by Lk. Crescent Hills, Crescent West, Highland Point. ***

COMET: SITE ID PROJECT ID 100208

RAW WATER SOURCE

☒ GROUND; Number of Wells 1
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☒ Emergency Water Source ***
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☒ None ☐ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Chlorination

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 3" Hersey
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments Lake Crescent Hills has the Auxiliary Generator(Propane gas)

PWS ID # 3354686
Date 10/22/96

GROUND WATER SOURCE

Well Number		1			
Year Drilled		1987			
Depth Drilled		210'			
Drilling Method		Combo			
Type of Grout		Neat Cement			
Static Water Level		33'			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		Unk			
Length (outside casing)		64'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk. Iron			
Well Contamination History		Unk			
Is inundation of well possible?		No			
6' X 6' X 4" Concrete Pad		Yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing	>200'			
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Goulds			
	Model Number	105L05			
	Rated Capacity (gpm)	550			
	Motor Horsepower	30			
Well casing 12" above grade?		Yes			
Well Casing Sanitary Seal		Ok			
Raw Water Sampling Tap		Yes			
Above Ground Check Valve		Yes			
Fence/Housing		Yes			
Well Vent Protection		No screen			

COMMENTS Algal growth in the pump head bowl.

PWS ID # 3354686
Date 10/22/96

CHLORINATION (Disinfection)
Type: ☒ Gas ☐ Hypo
Make Regal Capacity 150 gpd
Chlorine Feed Rate Unk
Avg. Amount of Cl_2 gas used unk
Chlorine Residuals: Plant 2.0 Remote 1.6
Remote tap location
DPD Test Kit: ☐ On-site ☒ With operator ☐ None ☐ Not Used Daily
Injection Points
Booster Pump Info Goulds 1Hp
Comments

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☒	
Auto-switchover	☐	☒	
Alarms:			
Loss of Cl_2 capability	☐	☒	
Loss of Cl_2 residual	☐	☒	
Cl_2 leak detection	☐	☒	
Scale	☒	☐	
Chained Cylinders	☒	☐	
Reserve Supply	☒	☐	
Adequate Air-pak	☒	☐	w/operator
Sign of Leaks	☐	☒	
Fresh Ammonia	☒	☐	
Ventilation	☒	☐	
Room Lighting	☒	☐	
Warning Signs	☐	☒	need signs
Repair Kits	☒	☐	lead wash
Fitted Wrench	☒	☐	
Housing/Protection	☒	☐	

AERATION (Gases, Fe, & Mn Removal)
Type N/A Capacity
Aerator Condition
Bloodworm Presence
Visible Algae Growth
Protective Screen Condition
Comments

STORAGE FACILITIES
(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	10,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	48/55		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	N/A		
Height to Max. Water Level	N/A		

Comments

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments

PWS ID # 3354686
Date 10/22/96

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	9/96	Monthly
		2	Distribution						
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	1996	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	10/30/90	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	1995 NONE	1996
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	1994	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	12/23/93	waiver 12/31/01
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/03/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	waiver
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	waiver
Lead and Copper	047	*(Note D)*	---	---			---	1995	9/1996
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # _____
Date _____

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354686
Date 10/22/96

MONITORING VIOLATIONS	MCL VIOLATIONS
vocs for 1995	
Quarterly monitoring for NO2 & NO3 for	
the new well (refer to WL 96-0077	
Nitrate and Nitrite for 1995	

DEFICIENCIES:

1. MOR reporting-- The number of service connections is not being reported.
2. Algal growth in the pump head bowl.
3. Need to post Chlorine gas use by the fence.
4. Chemical Monitoring violations:
   A) VOCs for 1995.
   B) Nitrate and Nitrite for 1995.
   C) Lead and Copper sampling for 1996
   D) Quarterly monitoring forNitrate from the Well as per **CLEARANCE** condition.

Inspector Roberto C. Cruz Title Env. Supervisor II Date 10/22/96

Approved by _____ Title _____ Date _____

Department of Environmental Protection

Docket 960444-WU
Exhibit ___ (DR-2)

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

June 23, 1997

COPY

Utilities, Inc. of Florida
200 Weathersfield Avenue
Altamonte Springs, FL 32714

OCD-PW-SS-97-1180

Attention: Donald Rasmussen

Lake County - PW

Crescent Bay S/D	- 3354686	Amberhill S/D	- 3354648
Crescent West S/D	- 3354690	Lake Ridge Club	- 3354884
Highland Point	- 3354652	Clermont #1/Four Winds	- 3351582
Lake Crescent Hills	- 3354883	Four Lakes & Harbor Oaks	- 3354647
Oranges S/D, The	- 3354685	Clermont #2/Carr Water	- 3350153
		Vistas S/D, The	- 3354773

Dear Mr. Rasmussen:

The Department conducted inspections of your public water systems on June 19, 1997. These inspections were conducted by me in the presence of Mr. Bryan Gongre. Copies of the Sanitary Survey Reports and/or Water Treatment Plant Compliance Inspection Reports are enclosed for your reference and records.

Deficiencies found during these inspections and/or in Department records are indicated below. These deficiencies shall be corrected in order to return to compliance with Florida Administrative Code (F.A.C.) Rules 62-550, 62-555, 62-560 and 61E12.

Please correct the indicated deficiencies, and notify the Department in writing that the deficiencies have been corrected, **no later than July 23, 1997**. *(You may use the enclosed response form to indicate the corrective actions taken.)*

DEFICIENCIES

Crescent West S/D--3354690

1. Properly abandon the 3" well.

Lake Crescent Hills--3354883

1. Clean Algal growth in the pump head discharge.

Clermont #2/Carr Water System--3350153

1. Pressure Tank has pin hole leak. This was noted during the last inspection.

The Department values your continued cooperation in operating and maintaining your water system, and appreciates the assistance provided during the sanitary survey.

If you have any questions concerning this letter, please contact me at the above address or by phone at (407) 893-3319.

Sincerely,

Roberto C. Ansag, Supervisor
Drinking Water Compliance/Enforcement

Enclosures

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name CLERMONT #2/CARR WATER SYSTEM County Lake PWS ID # 3350153
Plant Location East Lakeshore Drive, Clermont, FL 34711 Phone 407/869-1919
Owner Name Utlities,Inc. of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Avenue, Altamonte Springs, FL 32714
Contact Person Don Rasmussen Title Vice President Phone 407/869-1919
This Survey Date 6/19/97 Last Survey Date 10/14/94 Last C.I. Date 10/22/96

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential
C5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
A.J. Aldrich "C"--6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* *Actual*
Days/wk: *Required* Three *Actual* Three
Non-consecutive Days? ☒ Yes ☐ No ☐ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☒ No ☐ Yes ☐ N/A

Number of Service Connections 37
Population Served 129 Basis
Average Day (from MORs) 35,933 gpd
Max. Day (from MORs) 70,000 gpd
Max-day Design Capacity 86,400 gpd
Comments System is interconnected to Lake Ridge Club, Amberhill S/D, and Clermont #1.

COMET: SITE ID 80465 PROJECT ID 100222

RAW WATER SOURCE

☒ GROUND; Number of Wells 2
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☐ Emergency Water Source
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☐ None ☒ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Disinfection(Chlorination)

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 2" Badger
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed.
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments

PWS ID # 3351053
Date 6/19/97

GROUND WATER SOURCE

Well Number		1		2	
Year Drilled		unk		unk	
Depth Drilled		332'		243'	
Drilling Method		unk		unk	
Type of Grout		unk		unk	
Static Water Level		unk		unk	
Pumping Water Level		--		--	
Design Well Yield		--		--	
Test Yield		--		--	
Actual Yield (if different than rated capacity)		--		--	
Strainer		unk		unk	
Length (outside casing)		212'		206'	
Diameter (outside casing)		6"		4"	
Material (outside casing)		Blk. Steel		Blk. Steel	
Well Contamination History		unk		unk	
Is inundation of well possible?		no		no	
6' X 6' X 4" Concrete Pad		yes		yes	
SET BACKS	Septic Tank	unk		unk	
	Reuse Water	--		--	
	WW Plumbing	>100'		>100'	
	Other Sanitary Hazard	--		--	
PUMP	Type	Subm.		Subm.	
	Manufacturer Name	unk		unk	
	Model Number	unk		unk	
	Rated Capacity (gpm)	75		45	
	Motor Horsepower	5		3	
Well casing 12" above grade?		yes		yes	
Well Casing Sanitary Seal		ok		ok	
Raw Water Sampling Tap		yes		yes	
Above Ground Check Valve		yes		yes	
Fence/Housing		yes		yes	
Well Vent Protection		yes		-	

COMMENTS _____

PWS ID # 3350153
Date 6/19/97

CHLORINATION (Disinfection)

Type: ☐ Gas ☒ Hypo
Make Pulsa Feeder Capacity 30 gpd
Chlorine Feed Rate _____
Avg. Amount of Cl_2 gas used N/A
Chlorine Residuals: Plant 3.0 Remote .7ppm
Remote tap location _____
DPD Test Kit: ☐ On-site ☒ With operator
☐ None ☐ Not Used Daily
Injection Points _____
Booster Pump Info _____
Comments Has two feed pumps at 30 gpd each.

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☐	
Auto-switchover	☐	☐	
Alarms:			
Loss of Cl_2 capability	☐	☐	
Loss of Cl_2 residual	☐	☐	
Cl_2 leak detection	☐	☐	
Scale	☐	☐	
Chained Cylinders	☐	☐	
Reserve Supply	☐	☐	
Adequate Air-pak	☐	☐	
Sign of Leaks	☐	☐	
Fresh Ammonia	☐	☐	
Ventilation	☐	☐	
Room Lighting	☐	☐	
Warning Signs	☐	☐	
Repair Kits	☐	☐	
Fitted Wrench	☐	☐	
Housing/Protection	☐	☐	

AERATION (Gases, Fe, & Mn Removal)

Type _____ Capacity _____
Aerator Condition _____
Bloodworm Presence _____
Visible Algae Growth _____
Protective Screen Condition _____
Comments _____

STORAGE FACILITIES

(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	3,000		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	50/62		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	--		
Height to Max. Water Level	--		

Comments Pin Hole leak on the Pressure Tank.

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments _____

PWS ID # 3350153
Date 6/19/97

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	5/97	6.97
		2	Distribution				*monthly*	5/97	6/97
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	3rd annual 8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	2/21/91	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	12/12/96	1997
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	Waiver 12/23/93	2003
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	Waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	1997
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	Waiver
Lead and Copper	047	*(Note D)*	---	---			---	Call DEP	
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # 3350153
Date 6/19/97

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3350153
Date 6/19/97

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

1..Pressure tank has pin hole leak. This was noted during last year's inspection.

Inspector Roberto C Gomez Title Env. Supervisor II Date 6/19/97

Approved by _____ Title _____ Date _____

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name CLERMONT #1/FOUR WINDS S/D County Lake PWS ID # 3351582
Plant Location East Lakeshore Dr., Clermont, FL 34711 Phone 407/869-1919
Owner Name Utilities, Inc. of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Ave., Altamonte Springs, FL 32714
Contact Person Don Rasmussen Title Vice President Phone 407/869-1919
This Survey Date 6/19/97 Last Survey Date 10/14/94 Last C.I. Date 10/22/96

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential
C5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
A.J. Aldrich "C"--6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* *Actual*
Days/wk: *Required* Three *Actual*
Non-consecutive Days? ☒ Yes ☐ No ☐ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☒ No ☐ Yes ☐ N/A

Number of Service Connections
Population Served Basis
Average Day (from MORs) gpd
Max. Day (from MORs) gpd
Max-day Design Capacity gpd
Comments

COMET: SITE ID PROJECT ID

RAW WATER SOURCE

☐ GROUND; Number of Wells
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☐ Emergency Water Source
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☐ None ☐ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Disinfection(Chlorination)

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type
Backflow Prevention Devices: ☐ Yes ☐ No
Cross-connections
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments

PWS ID # 3351582
Date 6/19/97

GROUND WATER SOURCE

Well Number		1		2	
Year Drilled		unk		unk	
Depth Drilled		445'		387'	
Drilling Method		unk		unk	
Type of Grout		unk		unk	
Static Water Level		--		--	
Pumping Water Level		--		--	
Design Well Yield		--		--	
Test Yield		--		--	
Actual Yield (if different than rated capacity)		--		--	
Strainer		unk		unk	
Length (outside casing)		125'		159'	
Diameter (outside casing)		8"		4"	
Material (outside casing)		Blk.Steel		Blk.Steel	
Well Contamination History		unk		unk	
Is inundation of well possible?		no		no	
6' X 6' X 4" Concrete Pad		yes		yes	
SET BACKS	Septic Tank	>100'		>100'	
	Reuse Water	--		--	
	WW Plumbing	>100'		>100'	
	Other Sanitary Hazard	--		--	
PUMP	Type	Subm.		Subm.	
	Manufacturer Name	unk		unk	
	Model Number	unk		unk	
	Rated Capacity (gpm)	236		54	
	Motor Horsepower	20		5	
Well casing 12" above grade?		yes		yes	
Well Casing Sanitary Seal		ok		ok	
Raw Water Sampling Tap		yes		yes	
Above Ground Check Valve		yes		yes	
Fence/Housing		yes		yes	
Well Vent Protection		yes		yes	

COMMENTS System is interconnected to Amberhill S/D, Lake Ridge Club.

PWS ID # 3351582
Date 6/19/97

CHLORINATION (Disinfection)

Type: ☐ Gas ☒ Hypo
Make Chem-Tech Capacity 30 gpd
Chlorine Feed Rate _____
Avg. Amount of Cl_2 gas used N/A
Chlorine Residuals: Plant 3.0 Remote 1.5
Remote tap location _____
DPD Test Kit: ☐ On-site ☒ With operator ☐ None ☐ Not Used Daily
Injection Points _____
Booster Pump Info _____
Comments _____

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☐	☐	
Auto-switchover	☐	☐	
Alarms:			
Loss of Cl_2 capability	☐	☐	
Loss of Cl_2 residual	☐	☐	
Cl_2 leak detection	☐	☐	
Scale	☐	☐	
Chained Cylinders	☐	☐	
Reserve Supply	☐	☐	
Adequate Air-pak	☐	☐	
Sign of Leaks	☐	☐	
Fresh Ammonia	☐	☐	
Ventilation	☐	☐	
Room Lighting	☐	☐	
Warning Signs	☐	☐	
Repair Kits	☐	☐	
Fitted Wrench	☐	☐	
Housing/Protection	☐	☐	

AERATION (Gases, Fe, & Mn Removal)

Type _____ Capacity _____
Aerator Condition _____
Bloodworm Presence _____
Visible Algae Growth _____
Protective Screen Condition _____
Comments _____

STORAGE FACILITIES

(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		H/2
Capacity (gal)	1,000		900
Material	Steel		
Gravity Drain	Yes		Yes
By-pass Piping	Yes		N/A
Pressure Gauge	Yes		Yes
Sight Glass or Level Indicator	Yes		N/A
Fittings for Sight Glass	N/A		N/A
Protected Openings	Yes		N/A
PRV/ARV	ARV		None
On/Off Pressure	40/55		
Access Padlocked			
Height to Bottom of Elevated Tank			
Height to Max. Water Level			

Comments _____

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments _____

PWS ID # 3351582
Date 6/19/97

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	5/97	6/97
		2	Distribution				*monthly*	5/97	6/97
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	4/22/92	once in 1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	*12/12/96	*1997
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	Waiver 12/23/93	2003
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/03/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	--	--
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	--	--
Lead and Copper	047	*(Note D)*	---	---			---	contact dep.	
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # 3351582
Date 6/19/97

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3351582
Date 6/19/97

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

NOTE:

THERE WERE NO DEFICIENCIES NOTED . THANK YOU FOR A JOB WELL DONE.

NITRATE NITRITE QUARTERLY. FIRST QUARTER WAS DUE 3/31?97.

Inspector Roberto C. Amaya Title Env. Supervisor II Date 6/19/97

Approved by _____ Title _____ Date _____

State of Florida
Department of Environmental Protection
Central District

SANITARY SURVEY REPORT

Plant Name AMBERHILL S/D County Lake PWS ID # 3354648
Plant Location East Lakeshore Dr.,Clermont, FL 34711 Phone 407/869-1919
Owner Name Utilities,Inc. of Florida Phone 407/869-1919
Owner Address 200 Weathersfield Avenue, Altamonte Springs, FL 32714
Contact Person Don Rasmussen Title Vice President Phone 407/869-1919
This Survey Date 6/19/97 Last Survey Date 10/14/94 Last C.I. Date 10/22/96

PWS TYPE & CLASS

☒ Community
☐ Non-transient Non-community
☐ Non-Community

PWS STATUS

☒ Approved system with approval number & date

☐ Unapproved system

SERVICE AREA CHARACTERISTICS

Residential
C5C
Food Service: ☐ Yes ☐ No ☒ N/A

OPERATION & MAINTENANCE

Certified Operator: ☒ Yes ☐ No ☐ Not required
Operator(s) & Certification Class-Number
A.J.Aldrich "C"--6368

O & M Log: ☒ Yes ☐ No ☐ Not required
Operator Visitation Frequency
Hrs/day: *Required* *Actual*
Days/wk: *Required* six *Actual* six
Non-consecutive Days? ☐ Yes ☐ No ☒ N/A
MORs submitted regularly? ☒ Yes ☐ No ☐ N/A
Data missing from MORs? ☒ No ☐ Yes ☐ N/A

Number of Service Connections 45
Population Served 157 Basis
Average Day (from MORs) 241,000 gpd
Max. Day (from MORs) 390,000 gpd
Max-day Design Capacity 540,000 gpd
Comments System is interconnected to Clermont #1, Lake Ridge Club

COMET: SITE ID 80566 PROJECT ID 100216

RAW WATER SOURCE

☐ GROUND; Number of Wells
☐ SURFACE/UDI; Source
☐ PURCHASED from PWS ID #
☐ Emergency Water Source
Emergency Water Capacity

AUXILIARY POWER SOURCE

☐ Yes ☐ None ☒ Not Required
Source
Capacity of Standby (kW)
Switchover: ☐ Automatic ☐ Manual
Standby Plan: ☐ Yes ☐ No
Hrs Operated Under Load
What equipment does it operate?
☐ Well pumps
☐ High Service Pumps
☐ Treatment Equipment
Satisfy 1/2 max-day demand? ☐Yes ☐No ☐Unk
Comments

TREATMENT PROCESSES IN USE

Disinfection(Chlorination)

What additional treatment is needed?

For control of what deficiencies?

DISTRIBUTION SYSTEM

Flow Measuring Device Flow Meter
Meter Size & Type 6"
Backflow Prevention Devices: ☒ Yes ☐ No
Cross-connections None Observed.
Written Cross-connection Control Program: Yes
Coliform Sampling Plan: ☒ Yes ☐ No ☐ N/A
Comments

PWS ID # 3354648
Date 6/19/97

GROUND WATER SOURCE

Well Number		1			
Year Drilled		unk			
Depth Drilled		600'			
Drilling Method		unk			
Type of Grout		unk			
Static Water Level		unk			
Pumping Water Level		--			
Design Well Yield		--			
Test Yield		--			
Actual Yield (if different than rated capacity)		--			
Strainer		unk			
Length (outside casing)		160'			
Diameter (outside casing)		10"			
Material (outside casing)		Blk.Steel			
Well Contamination History		unk			
Is inundation of well possible?		no			
6' X 6' X 4" Concrete Pad		yes			
SET BACKS	Septic Tank	>200'			
	Reuse Water	--			
	WW Plumbing	>200'			
	Other Sanitary Hazard	--			
PUMP	Type	V.T.			
	Manufacturer Name	Goulds			
	Model Number	unk			
	Rated Capacity (gpm)	750			
	Motor Horsepower	60			
Well casing 12" above grade?		yes			
Well Casing Sanitary Seal		ok			
Raw Water Sampling Tap		yes			
Above Ground Check Valve		yes			
Fence/Housing		yeses			
Well Vent Protection					

COMMENTS _____

PWS ID # 3354648
Date 6/19/97

CHLORINATION (Disinfection)

Type: ☒ Gas ☐ Hypo
Make Regal Capacity 150 ppd
Chlorine Feed Rate 20lbs/day
Avg. Amount of Cl_2 gas used 8 ppd
Chlorine Residuals: Plant 3.0 Remote 1.5
Remote tap location _____
DPD Test Kit: ☐ On-site ☒ With operator ☐ None ☐ Not Used Daily
Injection Points _____
Booster Pump Info Goulds 2HP
Comments System is using less than 10 lbs.of chlorine per day.

Chlorine Gas Use Requirements	YES	NO	Comments
Dual System	☒	☐	
Auto-switchover	☒	☐	
Alarms:			
Loss of Cl_2 capability	☐	☒	using less
Loss of Cl_2 residual	☐	☒	than 10lbs
Cl_2 leak detection	☐	☒	per day.
Scale	☒	☐	
Chained Cylinders	☒	☐	
Reserve Supply	☒	☐	
Adequate Air-pak	☒	☐	
Sign of Leaks	☐	☒	
Fresh Ammonia	☒	☐	
Ventilation	☒	☐	
Room Lighting	☒	☐	
Warning Signs	☒	☐	
Repair Kits	☒	☐	
Fitted Wrench	☒	☐	
Housing/Protection	☒	☐	

AERATION (Gases, Fe, & Mn Removal)

Type _____ Capacity _____
Aerator Condition _____
Bloodworm Presence _____
Visible Algae Growth _____
Protective Screen Condition _____
Comments _____

STORAGE FACILITIES

(G) Ground (H) Hydropneumatic (E) Elevated
(B) Bladder (C) Clearwell

Tank Type/Number	H/1		
Capacity (gal)	7,500		
Material	Steel		
Gravity Drain	Yes		
By-pass Piping	Yes		
Pressure Gauge	Yes		
Sight Glass or Level Indicator	Yes		
Fittings for Sight Glass	N/A		
Protected Openings	Yes		
PRV/ARV	ARV		
On/Off Pressure	40/50		
Access Padlocked	Yes		
Height to Bottom of Elevated Tank	--		
Height to Max. Water Level	--		

Comments _____

HIGH SERVICE PUMPS

Pump Number			
Type			
Make			
Model			
Capacity (gpm)			
Motor HP			
Date Installed			
Maintenance			

Comments _____

PWS ID # 3354648
Date 6/19/97

COMPLIANCE MONITORING
COMMUNITY PUBLIC WATER SYSTEMS

CONTAMINANT	PWS Screen	# Samples Required	Sampling Location	C > 3300			C ≤ 3300		
				Frequency	Sample Date	Due Date	Frequency	Sample Date	Due Date
Microbiological (Bacte)	024	1	Each well	monthly			monthly	5/97	6.97
		2	Distribution				*monthly*	5/97	6/97
Volatile Organics	028	*(Note A)*	*(Note H)*	*(Notes A, 1)*			*(Notes A, 2)*	3rd.annual 8/31/95	1997
Pesticides & PCBs	029	*(Notes B, E)*	*(Note H)*	3 years *(Note 1)*			3 years *(Note 2)*	2/21/91	1997
Nitrate & Nitrite (as N)	030	1	POE	annually			annually	12/12/96	1997
Inorganics	030	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Asbestos	030	1 *(Note F)*	Distribution	9 years *(Note 7)*			9 years *(Note 8)*	Waiver 12/23/93	2003
Secondaries	031	1	POE	3 years *(Note 1)*			3 years *(Note 2)*	10/3/94	1997
Radionuclides	033	*(Note C)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	8/16/94	1997
Group I UOCs	035	*(Notes B, E, G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	Waiver
Group II UOCs	034	1 *(Notes E,G)*	POE	3 years *(Note 1)*			3 years *(Note 2)*	12/14/93	1997
Group III UOCs	036, 037	1 *(Note G)*	POE	*(Note 4)*			*(Note 5)*	12/14/93	1997
Lead and Copper	047	*(Note D)*	---	---			---	Call DEP	
TTHM (≥ 10,000 persons)	027	4/plant	Distribution	Quarterly			N/A	N/A	N/A

POE = Point of Entry (Samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.)

See Page 5 for description of italicized notes.

PWS ID # 3354648
Date 6/19/97

NOTES:

SAMPLES REQUIRED/SAMPLING LOCATION:

Note A See Rule 62-550.515(1), F.A.C. Each system shall take four consecutive quarterly samples during its assigned year in the system's first compliance period. If no contaminant is detected, the system shall monitor annually during the next three-year compliance period. If still no contaminants are detected, systems shall take one sample during each subsequent three-year compliance period.

If the initial monitoring for contaminants listed in Rule 62-550.310(2)(b), F.A.C., was completed prior to December 31, 1992, then each system shall take one sample annually beginning January 1, 1993.

Note B 4 consecutive quarterly samples. Credit will be given for samples taken before January 1, 1993.

Note C See Rule 62-550.519, F.A.C. Compliance shall be based on the average of analyses of four consecutive quarterly samples. A maximum of two quarterly samples may be composited. Subsequent samples shall be collected once every three years.

Note D Contact the Central District's Drinking Water Program at (407) 894-7555 or contact the Florida Rural Water Association.

Note E Contact Ms. Marie Carrasquillo of the Central District's Drinking Water Program at (407) 894-7555, extension 2242, to obtain an application for reduced monitoring.

Note F See Rule 62-550.511(4), F.A.C. A system without asbestos-containing components shall certify to the Department in writing, using DEP Form No. 62-555.910(10), that it is asbestos free. Certification shall satisfy subsections (1), (2), and (3) of the referenced rule, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

Note G See Rule 62-550.521(4), F.A.C. Systems serving less than 150 service connections and serving fewer than 350 persons should notify the Department, by submitting DEP Form No. 62-555.910(11), that their system is available for testing. Normally, these small systems will not be required to monitor for UOCs. Do not send such samples to the Department unless required to do so by the Department.

Note H First quarter samples shall be representative of each well. Subsequent samples shall be taken at each entry point to the distribution system that is representative of each source after treatment.

FREQUENCY:

Note 1 First year of each three-year compliance period (calendar years 1993, 1996, 1999, etc.)

Note 2 Second year of each three-year compliance period (calendar years 1994, 1997, 2000, etc.)

Note 3 Third year of each three-year compliance period (calendar years 1995, 1998, 2001, etc.)

Note 4 First year of the first three-year compliance period (i.e. calendar year 1993)

Note 5 Second year of the first three-year compliance period (i.e. calendar year 1994)

Note 6 Third year of the first three-year compliance period (i.e. calendar year 1995)

Note 7 First year of each nine-year compliance cycle (calendar years 1993, 2002, etc.)

Note 8 Second year of each nine-year compliance cycle (calendar years 1994, 2003, etc.)

Note 9 Third year of each nine-year compliance cycle (calendar years 1995, 2004, etc.)

PWS ID # 3354648
Date 6/19/97

MONITORING VIOLATIONS	MCL VIOLATIONS

DEFICIENCIES:

NOTE: THERE WERE NO DEFICIENCIES NOTED. THANK YOU FOR A JOB WELL DONE.

Inspector Roberto C Amaya Title Env. Supervisor II Date 6/19/97

Approved by _____ Title _____ Date _____

PWS ID Number 3354690

PWS Name CRESCENT WEST S/D

Mailing Address _____

_____

Date _____

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

Attention: BOB ANSAG

In response to the Department's sanitary survey letter/compliance inspection report for the subject public water system dated 6-19-97, the following actions were done to correct the listed deficiencies:

Deficiency Item No.	Corrective Action Done	Date Done

(Attach separate sheet if necessary)

I hereby certify to the correctness of the above information:

PWS Owner/Representative Signature _____

Typed or printed Name of PWS Owner/Representative _____

PWS ID Number 3354883

PWS Name LAKE CRESCENT HILLS

Mailing Address _____

_____

Date _____

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

Attention: BOB ANSAG

In response to the Department's sanitary survey letter/compliance inspection report for the subject public water system dated 6-19-97, the following actions were done to correct the listed deficiencies:

Deficiency Item No.	Corrective Action Done	Date Done

(Attach separate sheet if necessary)

I hereby certify to the correctness of the above information:

PWS Owner/Representative Signature _____

Typed or printed Name of PWS Owner/Representative _____

PWS ID Number 3350153

PWS Name CLERMONT #2/CARR WATER SYSTEM

Mailing Address _____

_____

Date _____

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

Attention: BOB ANSAG

In response to the Department's sanitary survey letter/compliance inspection report for the subject public water system dated 6-19-97, the following actions were done to correct the listed deficiencies:

Deficiency Item No.	Corrective Action Done	Date Done

(Attach separate sheet if necessary)

I hereby certify to the correctness of the above information:

PWS Owner/Representative Signature _____

Typed or printed Name of PWS Owner/Representative _____

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Crescent West S/A County LAKE PWS ID 3354690
Address So. Lakeshore Dr. Clermont, FL 32711 Phone 407/869-1919
Owner name Utilities Inc. of FL. Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/11/95 Last survey date 10/12/96
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential SC No. of service connections
Food service? ☐ Yes ☒ No Served population

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number:
A. J. Aldrich "C" - 6766
O&M log: ☒ yes ☐ no LK. Crescent Hills, Crescent Bay

WELL

Number of wells 1 Standby well?
Auxiliary power.. ☐ yes ☒ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal..... ☒ OK ☐
Raw water tap: ☒ yes ☐ no
☐ not smooth nosed
Check valve..... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 2.0 ppm Remote .5 ppm
DPD-type test kit..... ☒ yes ☐ no
Gas cylinder scale..... ☒ yes ☐ no
Gas cylinder chained..... ☒ yes ☐ no
Adequate air-pak..... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation..... ☒ yes ☐ no
Dual chlorination..... ☐ yes ☒ no
Auto-switchover..... ☐ yes ☒ no
Alarm ..... ☒ yes ☐ no

AERATION: Type
Condition

OTHER TREATMENT PROCESSES:

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none
Backflow prevention devices: ☐ yes ☐ no
Cross-connections None observed.

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type	H/1			
Capacity	10,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	38 55			
Sight glass	yes			
Fittings for sight glass	—			
Air release valve	yes			
Pressure relief valve				
Access padlocked	yes			

DEFICIENCIES / COMMENTS

1. Abandon the 3" well.

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN 7/19/97 STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Arroyo Title Env. Sup. II Date 6/19/97
Received by Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Crescent Bay S/A County LAKE PWS ID 3354686
Address So. Lakeshore Dr., Clermont, FL 32711 Phone 407/869-1919
Owner name Utilities, Inc. of Florida Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/11/95 Last survey date 10/22/96
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential SC No. of service connections
Food service? ☐ Yes ☒ No Served population

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number:
A. J. Aldrich "C" - 6366
O&M log: ☒ yes ☐ no Lk. Crescent Hills, Highland Ridge

WELL

Number of wells 1 Standby well?
Auxiliary power.. ☐ yes ☒ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal..... ☒ OK ☐ -
Raw water tap: ☒ yes ☐ no
☐ not smooth nosed
Check valve..... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 1.5 ppm Remote .5 ppm
DPD-type test kit..... ☒ yes ☐ no
Gas cylinder scale..... ☒ yes ☐ no
Gas cylinder chained..... ☒ yes ☐ no
Adequate air-pak..... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation..... ☒ yes ☐ no
Dual chlorination..... ☐ yes ☒ no
Auto-switchover..... ☐ yes ☒ no
Alarm ..... ☒ yes ☒ no

AERATION: Type Less than 10 Kgs.
Condition Average.

OTHER TREATMENT PROCESSES:

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none
Backflow prevention devices: ☐ yes ☐ no
Cross-connections None observed.

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type	H/I			
Capacity	10 000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	45 ~~55~~			
Sight glass	yes			
Fittings for sight glass	—			
Air release valve	yes			
Pressure relief valve	-			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN _____ STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Arroyo Title Env. Sup. II Date 6/19/97
Received by Title Area Mgr. Date 6/19/97
Form left: ☐ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name VISTAS S/D, THE County LAKE PWS ID 3354773
Address US Highway 27 South, Clermont, FL 32711 Phone 407/869-1919
Owner name Utilities INC of FL. Contact Don Rasmussen
Owner address 200 Weatherfield Ave, Altamonte Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/06/95 Last survey date 10/22/96
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential, SC No. of service connections 62
Food service? ☐ Yes ☒ No Served population ____

OPERATION & MAINTENANCE
Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number: A. J. Aldrich "C" #368
O&M log: ☒ yes ☐ no Oranges S/D

WELL
Number of wells 1 Standby well? ____
Auxiliary power.. ☐ yes ☒ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal...... ☒ OK ☐ ____
Raw water tap: ☒ yes ☐ no ☐ not smooth nosed
Check valve....... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards ____

CHLORINATION
Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 2.5 PPM Remote 1.5 PPM
DPD-type test kit........... ☒ yes ☐ no
Gas cylinder scale.......... ☒ yes ☐ no
Gas cylinder chained...... ☒ yes ☐ no
Adequate air-pak........... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation...... ☒ yes ☐ no
Dual chlorination............ ☐ yes ☒ no
Auto-switchover............ ☐ yes ☒ no
Alarm 150 lbs / DM ☐ yes ☒ no

1 H.P. Goulds

AERATION: Type ____
Condition ____

OTHER TREATMENT PROCESSES:

OTHER
Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none 6" Hersey
Backflow prevention devices: ☒ yes ☐ no
Cross-connections None observed

STORAGE TANKS
(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type (Steel)	H/1			
Capacity	10,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	42/50			
Sight glass	yes			
Fittings for sight glass	—			
Air release valve	yes			
Pressure relief valve	—			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

No Def. noted
Good work!!
Thank you

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN ____ STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Guray Title Env. Sup. II Date 6/19/97
Received by [signature] Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Lk. Ridge club County Lake PWS ID 3354884
Address East Lakeshore Dr. Clermont, FL 32711 Phone 407/869-1919
Owner name Utilities, Inc. of FL Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/14/96 Last survey date 10/6/95
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential, SC No. of service connections 78
Food service? ☐ Yes ☐ No Served population ______

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number: A.J. Aldrich "C"
O&M log: ☐ yes ☐ no Clermont #1 Amberhill S/B

WELL

Number of wells 1 Standby well? ______
Auxiliary power.. ☐ yes ☐ no ☒ N/A
6' x 6' x 4" pad ☑ yes ☐ no
Sanitary seal...... ☒ OK ☐ ______
Raw water tap: ☑ yes ☐ no ☐ not smooth nosed
Check valve....... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards ______

Gould's 1 1/2 H.P.

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 1.5 ppm Remote ______
DPD-type test kit........... ☒ yes ☐ no
Gas cylinder scale.......... ☑ yes ☐ no
Gas cylinder chained...... ☑ yes ☐ no
Adequate air-pak........... ☑ yes ☐ no
Fresh ammonia solution.. ☑ yes ☐ no
Adequate ventilation...... ☒ yes ☐ no
Dual chlorination............ ☐ yes ☑ no
Auto-switchover............ ☐ yes ☑ no
Alarm .... ☒ yes ☒ no

AERATION: Type ✓ visual
Condition X

OTHER TREATMENT PROCESSES:

______

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none
8"
Backflow prevention devices: ☒ yes ☐ no
Cross-connections None observed.

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type (Steel)	H/1			
Capacity gal.	7,500			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	35/60			
Sight glass	yes			
Fittings for sight glass	—			
Air release valve	yes			
Pressure relief valve	-			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

No Deficiencies noted. Good work. Thank you.

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN ______ **STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT.** Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Guerag Title Env. Sup. II Date 6/19/97
Received by [signature] Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Highland Point County Lake PWS ID 3354657
Address Bronson Rd. off S.R. 561 South, Clermont, FL 34711 Phone 407/869-1919
Owner name Utilities, Inc. of Florida Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/11/95 Last survey date 10/22/96
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential SC No. of service connections ____
Food service? ☐ Yes ☒ No Served population ____

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number: A. J. Aldrich 'C' – Lk. Crescent Hill, Crescent Bay
O&M log: ☐ yes ☐ no

WELL

Number of wells 1 Standby well? ____
Auxiliary power.. ☐ yes ☒ no ☐ N/A
6' x 6' x 4" pad ☐ yes ☐ no
Sanitary seal...... ☐ OK ☐ ____
Raw water tap: ☐ yes ☐ no ☐ not smooth nosed
Check valve....... ☐ yes ☐ no
Fence/housing.... ☐ yes ☐ no
Sanitary hazards ____

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 1 — Remote .5 ppm
DPD-type test kit........... ☒ yes ☐ no
Gas cylinder scale.......... ☒ yes ☐ no
Gas cylinder chained...... ☒ yes ☐ no
Adequate air-pak........... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation...... ☒ yes ☐ no
Dual chlorination............ ☐ yes ☒ no
Auto-switchover............ ☐ yes ☒ no
Alarm .... ☐ yes ☒ no

AERATION: Type ____
Condition ____

OTHER TREATMENT PROCESSES:

____

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none
Backflow prevention devices: ☐ yes ☐ no
Cross-connections ____

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type	H/1			
Capacity	5,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	38/55			
Sight glass	yes			
Fittings for sight glass	–			
Air release valve	yes			
Pressure relief valve	–			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

Water is ... Crescent Hills ... Crescent Bay & ... Lk. Crescent West ... Crescent ... system down.

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN ____ STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Amaya Title Env. Sup. II Date 6/19/97
Received by [signature] Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Four Lakes & Harbor Oaks County Lake PWS ID 3354647
Address Alpha Rd. off Ridgewood, off 455 W, Montverde, FL 34756 Phone 407/469-1919
Owner name Utilities, Inc. of FL Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs 32714 Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/22/96 Last survey date 10/11/95
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential No. of service connections 54
Food service? ☐ Yes ☒ No Served population

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number:
A. J. Aldrich "C"
O&M log: ☐ yes ☐ no

WELL

Number of wells 2 Standby well?
Auxiliary power.. ☐ yes ☐ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal..... ☐ OK ☐
Raw water tap: ☒ yes ☐ no
☐ not smooth nosed
Check valve..... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards

CHLORINATION

Chlorinator type: ☐ Gas ☒ Hypo
Cl_2 residual: Plant 2.5 ppm Remote 1.2 ppm
DPD-type test kit..... ☐ yes ☐ no
Gas cylinder scale..... ☐ yes ☑ no
Gas cylinder chained..... ☐ yes ☐ no
Adequate air-pak..... ☐ yes ☐ no
Fresh ammonia solution.. ☐ yes ☐ no
Adequate ventilation..... ☐ yes ☐ no
Dual chlorination..... ☐ yes ☐ no
Auto-switchover..... ☑ yes ☐ no
Alarm ..... ☐ yes ☐ no

AERATION: Type
Condition

OTHER TREATMENT PROCESSES:

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none
Backflow prevention devices: ☑ yes ☐ no
Cross-connections none observed

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type (Steel)	H/1			
Capacity	2,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	40/60			
Sight glass	yes			
Fittings for sight glass	-			
Air release valve	yes			
Pressure relief valve	-			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN _____ STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Garcia Title Env. Sup. II Date 6/19/97
Received by _____ Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☐ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name LAKE CRESCENT HILLS County LAKE PWS ID 3354883
Address SR 561 South, Clermont, FL 32711 Phone 407/869-1919
Owner name Utilities Inc. of FL. Contact Don Rasmussen
Owner address 200 Weathersfield Ave. ALTAMONTE Springs Phone 407/869-1919
This inspection date 6/19/97 Last C.I. date 10/22/96 Last survey date 10/11/95
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential SC No. of service connections 90
Food service? ☐ Yes ☒ No Served population

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number:
A. J. Aldrich 'C'
O&M log: ☒ yes ☐ no Crescent Bay, West Highland pt.

WELL

Number of wells 1 Standby Well?
Auxiliary power.. ☒ yes ☐ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal...... ☒ OK ☐
Raw water tap: ☒ yes ☐ no
☐ not smooth nosed
Check valve....... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards

(margin notes: ... pump gas 15 Kw)

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 2.0 PPM Remote .5 PPM
DPD-type test kit........... ☒ yes ☐ no
Gas cylinder scale.......... ☒ yes ☐ no
Gas cylinder chained...... ☒ yes ☐ no
Adequate air-pak........... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation...... ☒ yes ☐ no
Dual chlorination............ ☒ yes ☐ no
Auto-switchover............ ☒ yes ☐ no
Alarm .... visual ☒ yes ☐ no

(margin notes: ... 1 HP)

AERATION: Type
Condition X

OTHER TREATMENT PROCESSES:

OTHER

Flow measuring device:
☒ meter ☐ elapsed time clock ☐ none (8")
Backflow prevention devices: ☒ yes ☐ no
Cross-connections None observed.

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type (Steel)	H/I			
Capacity	10,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	40/60			
Sight glass	yes			
Fittings for sight glass	–			
Air release valve	yes			
Pressure relief valve	–			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

1. Clean algae in the pump head discharge.
2. Check auto. switch for the Aux. gen. (corrected – no Problem)

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN 7/19/97 **STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT.** Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

Inspector Roberto C. Amaya Title Env. Sup. II Date 6/19/97
Received by [signature] Title Area Mgr. Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

State of Florida
Department of Environmental Protection
Central District

WATER TREATMENT PLANT COMPLIANCE INSPECTION REPORT

Plant name Oranges S/D, THE   County LAKE   PWS ID 3354685
Address Lk. Louisa Road, Clermont, FL 32711   Phone 407/869-1919
Owner name Utilities, Inc. of FL   Contact Don Rasmussen
Owner address 200 Weathersfield Ave. Altamonte Springs   Phone 407/869-1919
This inspection date 6/19/97   Last C.I. date 10/06/95   Last survey date 10/22/96
PWS Type: ☒ Community ☐ Non-Transient Non-Community ☐ Non-Community
Service area characteristics Residential, SC   No. of service connections 88
Food service? ☐ Yes ☒ No   Served population ______

OPERATION & MAINTENANCE

Certified operator: ☒ Yes ☐ No ☐ N/A
Operator & certification class-number: A. J. Aldrich "C" 6368
O&M log: ☒ yes ☐ no

WELL

Vistas S/D

Number of wells 1   Standby well? ______
Auxiliary power.. ☐ yes ☒ no ☐ N/A
6' x 6' x 4" pad ☒ yes ☐ no
Sanitary seal...... ☒ OK ☐ ______
Raw water tap: ☒ yes ☐ no ☐ not smooth nosed
Check valve....... ☒ yes ☐ no
Fence/housing.... ☒ yes ☐ no
Sanitary hazards ______

CHLORINATION

Chlorinator type: ☒ Gas ☐ Hypo
Cl_2 residual: Plant 2.5 PPM   Remote ______
DPD-type test kit........... ☒ yes ☐ no
Gas cylinder scale.......... ☒ yes ☐ no
Gas cylinder chained...... ☒ yes ☐ no
Adequate air-pak........... ☒ yes ☐ no
Fresh ammonia solution.. ☒ yes ☐ no
Adequate ventilation...... ☒ yes ☐ no
Dual chlorination............ ☒ yes ☐ no
Auto-switchover............ ☒ yes ☐ no
Alarm less than 10 lbs. ☐ yes ☒ no

Guards 1 HP

AERATION: Type ______

Condition ______

OTHER TREATMENT PROCESSES:

______

OTHER

Flow measuring device:
6" ☒ meter ☐ elapsed time clock ☐ none
Backflow prevention devices: ☒ yes ☐ no
Cross-connections None observed.

(margin: 6" [illegible] precision)

STORAGE TANKS

(G) Ground (C) Clearwell (E) Elevated
(B) Bladder (H) Hydropneumatic/flow-through

Tank type (Steel)	H/1			
Capacity	5,000			
Gravity drain	yes			
By-pass piping	yes			
Pressure gauge	yes			
On/Off pressure	38 / 58			
Sight glass	yes			
Fittings for sight glass	–			
Air release valve	yes			
Pressure relief valve	–			
Access padlocked	yes			

DEFICIENCIES / COMMENTS

No Def.
Good work
Thank you

PLEASE CORRECT THE INDICATED DEFICIENCIES AND PROVIDE A WRITTEN STATEMENT TO THE DEPARTMENT NO LATER THAN ______ STATING THAT ALL LISTED DEFICIENCIES HAVE BEEN CORRECTED; FAILURE TO DO SO WILL RESULT IN THE TAKING OF APPROPRIATE ENFORCEMENT ACTION BY THE DEPARTMENT. Send your response to: Department of Environmental Protection, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803. Phone:(407)894-7555

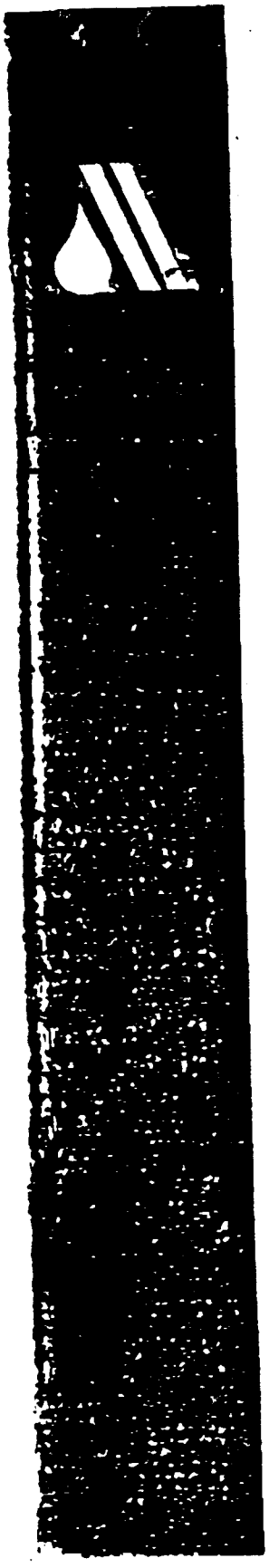
Inspector Roberto C. Arroyo   Title Env. Sup. II   Date 6/19/97
Received by [illegible]   Title Area Mgr.   Date 6/19/97
Form left: ☒ on site ☒ with water plant operator ☒ with water purveyor

Romy 02/15/94

Lake Utility Services, Inc.
Analysis of Interconnected Mains
TYE 12/31/95

Reference No.	Vendor No.	Vendor Name	Dollar Amt.
38509	6760	Farner Barley & Associates	1,707.50
40159	6760	Farner Barley & Associates	275.00
41817	6760	Farner Barley & Associates	1,320.00
42756	6760	Farner Barley & Associates	724.63
44269	6760	Farner Barley & Associates	245.00
44638	6760	Farner Barley & Associates	2,052.50
46521	6760	Farner Barley & Associates	500.00
46667	6760	Farner Barley & Associates	1,712.50
48361	6760	Farner Barley & Associates	2,522.50
48362	6760	Farner Barley & Associates	149.25
52237	6760	Farner Barley & Associates	1,208.77
52238	6760	Farner Barley & Associates	2,886.63
56325	6760	Farner Barley & Associates	117.00
56326	6760	Farner Barley & Associates	225.00
57560	6760	Farner Barley & Associates	150.00
53815	6760	Farner Barley & Associates	2,382.21
53816	6760	Farner Barley & Associates	750.00
54760	6760	Farner Barley & Associates	5,000.00
55109	6760	Farner Barley & Associates	235.00
55110	6760	Farner Barley & Associates	487.50
58131	8116	Belleview Underground, Inc.	51,419.66
58731	6760	Farner Barley & Associates	2,110.00
60108	6760	Farner Barley & Associates	870.21
60568	1228	Clayton Group Inc	575.00
60569	1228	Clayton Group Inc	153.69
60656	8116	Belleview Underground, Inc.	60,711.54
61629	6760	Farner Barley & Associates	812.50
62409	6760	Farner Barley & Associates	200.00
63696	8306	H.C. Connell, Inc.	3,289.00
65620	3466	American Express	820.00
65915	6760	Farner Barley & Associates	742.50
67133	6760	Farner Barley & Associates	1,012.50
69831	6471	Ben E. Girtman, Attorney at Law	1,978.23
73007	6760	Farner Barley & Associates	600.00
73723	6471	Ben E. Girtman, Attorney at Law	787.42
495	8306	H.C. Connell, Inc.	4,882.91
496	8306	H.C. Connell, Inc.	101,116.90
2223	6760	Farner Barley & Associates	4.90
2224	6760	Farner Barley & Associates	80.00
78570	6760	Farner Barley & Associates	405.90
79292	6760	Farner Barley & Associates	600.00
79840	6760	Farner Barley & Associates	1,602.50
82636	6760	Farner Barley & Associates	345.00

82637	6760	Farner Barley & Associates	937.50
82779	6760	Farner Barley & Associates	167.12
83602	6760	Farner Barley & Associates	1,787.50
83839	6471	Ben E. Girtman, Attorney at Law	199.02
85025	8306	H.C. Connell, Inc.	68,124.55
85026	6760	Farner Barley & Associates	625.00
86875	8306	H.C. Connell, Inc.	65,879.28
87345	8306	H.C. Connell, Inc.	9,910.45
88286	6760	Farner Barley & Associates	1,401.25
88918	8306	H.C. Connell, Inc.	52,979.38
88919	8306	H.C. Connell, Inc.	2,504.47
89445	6760	Farner Barley & Associates	525.00
89447	8306	H.C. Connell, Inc.	127,828.93
90067	6760	Farner Barley & Associates	573.16
90068	6760	Farner Barley & Associates	1,012.50
91052	6760	Farner Barley & Associates	262.50
91055	8306	H.C. Connell, Inc.	101,582.22
91055	8306	H.C. Connell, Inc.	67,871.00
95492	8306	H.C. Connell, Inc.	59,456.43
96262	6760	Farner Barley & Associates	90.40
98338	9106	McCoy & Associates	1,250.00
	Sub-Total - Invoices		824,739.01
Sub 628	Operator's Capitalize Time		282.00
Sub 634	Operator's Capitalize Time		94.00
Sub 636	Operator's Capitalize Time		634.50
Sub 661	Operator's Capitalize Time		3,666.00
Sub 662	Operator's Capitalize Time		3,008.00
Sub 665	Operator's Capitalize Time		470.00
Sub 628	Operator's Capitalize Time		240.00
Sub 631	Operator's Capitalize Time		432.00
Sub 632	Operator's Capitalize Time		972.00
Sub 633	Operator's Capitalize Time		2,760.00
Sub 634	Operator's Capitalize Time		936.00
Sub 636	Operator's Capitalize Time		1,734.00
Sub 661	Operator's Capitalize Time		3,318.00
Sub 662	Operator's Capitalize Time		696.00
Sub 665	Operator's Capitalize Time		1,632.00
Sub 667	Operator's Capitalize Time		22,536.00
Sub 628	Operator's Capitalize Time		4,532.00
	Sub-Total - Capitalized Time		47,942.50
	Sub-Total - CIAC Property		28,500.00
	Total - Interconnecting Mains		901,181.51



Water Distribution Training Course

AMERICAN WATER WORKS ASSOCIATION

MANUAL OF WATER SUPPLY PRACTICE

tained under fire demand, particularly in high-value districts, as such pressures permit the fire department to use direct streams from the hydrants effectively without pumpers.

The topography of a service area has much to do with the maintenance of good pressures throughout the system. When the area is very hilly and has a considerable range of elevation, it becomes nearly impossible to effect a standard pressure which is neither too high in the low areas nor too low in the high areas. Pressures in excess of 100 psi should preferably be avoided, but sometimes they cannot be. When such high pressures are necessary, it is wise to have the individual customers provide pressure-reducing valves to limit the pressures to 100 psi or less.

Although excess pressures promote pipeline failures and excess leakage, the losses resulting from increased leakage and the cost of repairing mains (for the most part) broken by pressure increases are usually more than offset by the increased revenues resulting from better registration of meters and increased usage. This is true, of course, only if the system is substantially metered.

Unaccounted-for Water

Conservation of water is a fundamental and proper concern of water system operation, not only to prevent depletion and ill use of an important natural resource, but to secure direct money savings in operation and long-range savings in deferred capital costs for plant expansion. Good modern water utility practice dictates that all customer services be metered whenever possible. Plant output as well as plant uses should likewise be metered to secure proper records. The difference between the total net plant output delivered to the distribution system and the total measured quantity of water passing through customers' services for the same specified time is termed the "unaccounted-for" or the "non-revenue-producing" water.

Use of Estimates

In order to reduce unaccounted-for water as much as possible, many operators attempt to estimate the amount of unmetered uses, such as street flushing and fire-fighting or service to publicly owned buildings, hospitals, and charitable institutions. Such attempts sometimes go as far as to include allowances for system leakage and underregistration of customer meters and thereby account for almost all the water produced.

In systems which are completely metered, or substantially so, a proper determination of unaccounted-for water should contain no estimates, for, in the final analysis, the judgment of the estimator is biased by his desire to explain away excess losses, waste, or unmetered uses. In systems where

only partial metering is in effect, accurate estimates of unaccounted-for water are virtually unobtainable. If unmetered customers form a relatively small percentage of the total, an estimate of water used by such customers based upon the average use of similar metered customers may be proper to secure a reasonable estimate, but the basis for such estimates should be recorded.

The amount of water used for flushing streets and fighting fires is relatively small. It has been estimated by some operators to be 1–3 per cent. The amount of water lost in the pipe system through unavoidable leakage—that is, leakage in mains and services which would cost more to locate and stop than the lost water is worth—has been variously estimated at 1,000–3,000 gpd per mile of pipe, depending on such factors as the age and condition of the pipe system, prevailing system pressures, and ground conditions. Underregistration of meters in a system may vary from as low as 2 per cent to as high as 15 per cent, depending upon the size of meter and efficiency of the meter maintenance program. Unauthorized uses of water, such as through an unmetered fire line or, on occasion, by deliberately bypassing meters, sometimes prove to be an important factor.

Desirable Results

The proper amount of unaccounted-for water in any given system is a function of that system alone. It might range, in a substantially fully metered system, from as much as 35 per cent to as little as 5 per cent. The former percentage may apply if pressures are very high and variable, leakage is difficult to detect and remedy, the pipe system is extensive and old, or practically all customers use water only in small amounts (a principal cause of underregistration of meters). The smaller percentage may be a result of low pressures, the existence of only a few customers who each take a considerable percentage of the total water, and a small mileage of mains. A fair average of unaccounted-for water might be 10–20 per cent for fully metered systems with good meter maintenance programs and average conditions of service.

Expansion of Service Areas

Expansion of service areas presents one of the most critical problems in the provision of adequate and reliable water service. In most cities, great increases in population are not taking place within the political boundaries; they are more often taking place through rather haphazard annexation of outlying areas. County- or area-wide planning is becoming increasingly necessary to determine adequately the extent of the future growth of a water system. The extent of such expansion, both in the immediate and more remote future, must be recognized in planning the distribution system.

Distribution System(s) for LUSI

	# of Lots Served	Total # of Lots
Clermont II	35	70
Highland Point	32	48
Crescent Bay	45	107
Crescent West	70	102
Lake Crescent Hills	77	138
Preston Cove	49	107
South Clermont Region	182	677
EDB customers		* -44
Total	433	1,135

* Note - When water lines were installed to serve EDB homes the mains passed 44 existing homes with wells